

Dr Suvarna Nalapat Notebook 1997

Game of Knowledge LEELA

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Gazetted Entitlement Register

OUR RANGE OF PRODUCTS

ANAFEN Tablets
(Diclofenac Sodium + Paracetamol + Aluminium Hydroxide Gel)
(Analgesic, Antipyretic & Anti - Inflammatory)

BACIPLEX Capsules
(Vitamin B Complex, Ascorbic Acid, Zinc Sulphate with Lactic Acid Bacillus)

BIPINOL - 50 Tablets
(Anti-Hypertensive)

BUCIFEN Tablets
(Anti - Inflammatory, Analgesic)

COLIF Tablets
(For relief from Colic)

DICI-K Tablets Film Coated Tablets
(Analgesic & Anti-Inflammatory)

FLUFEN Tablets
(Pseudoephedrine HCl + Paracetamol + CPM)
(Anti-Flu)

നാലുകെട്ടിൽ നിന്ന് പിരി
ഞ്ഞുപോയ ഒരു കൂട്ടം
ആൾ (ജ്ഞാതിയൻ നായർ
ഒരു കല്യാണം കഴിച്ചിട്ട്)
[illegible] (N.P.
[illegible]
[illegible])
[illegible] - [illegible]
[illegible].

FURIL Tablets
(Anti-Diarrhoeal)

HAEMANIC Capsules
(Haematinic)

MEXAM-200 & MEXAM-400
Film Coated Tablets
(Anaerobic infections, Amoebiasis, Giardiasis Trichomoniasis, Ulcerative Gingivitis)

MEXAQUIN Tablets Film Coated Tablets
(Anti-Amoebic)

Indian Festivals 1997

LOHRI - 13TH JANUARY, MONDAY

MAKAR SANKRANTI/PONGAL/MAGHA BIHU- 14TH JANUARY, TUESDAY : A major harvest festival of India. It is one of the biggest event in the states of Tamil Nadu, Karnataka & Andhra Pradesh. Also celebrated in the eastern region when millions of pilgrims take a holy dip in the Ganges.

REPUBLIC DAY.- 26TH JANUARY, : The National festival of India observed throughout the country to mark the inauguration of the Republic of India on 26th January, 1950. In Delhi, the celebrations include a magnificent parade of the Armed Forces, folk dances and floats from all the different states of India.

BASANT PANCHAMI/SHRI PANCHAMI- 10TH FEBRUARY, MONDAY : A Spring festival at which kite flying competitions are held. The goddess of learning Saraswati is worshiped on Shri Panchami day by student in eastern India.

***ID-UL-FITTAR (RAMZAN ID)- 10TH FEBRUARY, MONDAY** : Celebrated to mark the end of Ramzan, the Muslim month of fasting. It is an occasion for feasting and rejoicing.

MAHASHIVRATRI- 7TH MARCH, FRIDAY : Hindus perform puja of Lord Shiva by fasting on this day.

HOLI/DULHENDI- 23-24TH MARCH, SUNDAY- MONDAY : It is also a spring festival and the most boisterous of all the festivals of India observed all over the country, Men, women and children throw coloured water and powder on one another.

BANK HOLIDAY 1ST WORKING DAY OF APRIL

BAISAKHI- 13TH APRIL, SUNDAY : Baisakhi is a very popular festival of Punjab. It is celebrated at the time of harvesting of crops.

AMBEDKAR JAYANTI- 14TH APRIL , The birth anniversary of Dr. Baba Saheb Ambedkar the founder of constitution of India.

RAMNAVAMI- 16TH APRIL, WEDNESDAY : Birthday of Lord Rama, the ninth reincarnation of Lord Vishnu, is celebrated all over India. The epic Ramayana is recited for days in temples and homes.

***ID-UL-ZUHA (BAKRID) - 18TH APRIL, FRIDAY** : Observed by Muslims to commemorate the Prophet Ibrahim's offer to sacrifice his son.

MAHAVIR JAYANTI- 20TH APRIL,SUNDAY : The birth anniversary of Lord Mahavira.

BUDDHA PURNIMA - 22nd May, Thursday : This full moon day is celebrated as the day of birth, enlightenment and Mahaparinivana or salvation of Lord Buddha.

***MUHARRAM- 18TH MAY, SUNDAY** : Commemorates the martyrdom of Imam Hussain, the Grandson of the prophet Muhammad Tazias, Symbolic of the martyr's tomb at Karbala are carried in mourning processions of Muharram, as observed in Lucknow is famous.

INDEPENDENCE DAY- 15TH AUGUST, FRIDAY : The anniversary of India's Independence won on this day in 1947.

RAKSHA BANDHAN - 18TH AUGUST, MONDAY : Celebrated by Hindus Particularly in northern India, sisters tie Holy Thread/Rakhi on the wrists of their brothers wishing their long life. Brothers take oath to protect their honour and help them in adversities.

JANAMASHTMI - 25TH SEPTEMBER, THURSDAY : The birth anniversary of Lord Krishna, celebrated with great enthusiasm all over India, specially at Mathura and Vrindaban.

GANDHI JAYANTI- 2ND OCTOBER, THURSDAY : The birth anniversary of Mahatma Gandhi the Father of the Nation is celebrated with reverence all over the country and devotional prayers are held at his memorial at Rajghat in Delhi.

DUSSEHRA/DURGA PUJA- 11TH OCTOBER, SATURDAY : Based on the epic story of Ramayana signifying the good over evil, is celebrated all over the country. In Bengal it is observed as Durga Puja.

DIWALI - 31ST OCTOBER, . The brightest Indian Festival. A special feature of festival is the worship of Laxmi, the goddess of wealth and prosperity.

GURU NANAK JAYANTI- 14TH NOVEMBER, FRIDAY : The birth anniversary of Guru Nanak, the founder of Sikhism is celebrated with great devotion by the Sikh Community.

CHRISTMAS DAY- 25TH DECEMBER, THURSDAY : The birth of Jesus Christ is celebrated in India with the traditional exchange of greetings and gifts.

****KINDLY COMPARE THE HOLIDAYS WITH GOVERNMENT GAZETTE.***

Every care has been taken in the compilation of the information included, but responsibility for the accuracy there of cannot be accepted.

Leela - Game of Knowledge . by
Harish Johari
Rupa & Co. 1984 edition :
originally called Gyan Chaupad.

gyan = [illegible]. Chaupad = game of dice.
A game of knowledge played c̄ dice
72 squares c̄ snakes & arrows.
2000 yr old game of Hinduism.
A book of accompanying slokas-
Each square represent a space.
yogis explored / synthesis of self
& discovered 72 primary states of being.
These states are / squares of / game of leela,
a periodic table of consciousness.

Human cycle of octaves -
1st cycle - age 1 to 7 - self centred
2nd - 7 - 14 - relates to grps, friends
in a realm of fantasy. develop aesthetic
sense, involvement in fine arts & opposite
sex;

FEB	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28			

3rd – 14 – to 21 → wants to establish identity. wants power – affiliates himself to groups or ideology.

4th – 21 to 28 – Sense ^ responsibility. Can understand about others – appreciate their attributes

5th – 28 – 35 – instructs others from own experience & assumes / role ^ teacher, often ē responsibilities ^ parenthood.

6th – 35 – 42 – Observer ^ his own energy patterns – Reviews his past karmas in / light ^ experience.

7th – 42 to 49 – Well settled, lives ē / aim ^ finding & merging ē truth

/ 7 planes thro ē / player has to pass before he reaches / 8th plane – / plane beyond all planes – are / 7 chakras. ([illegible])

Individuals vibrating at / 1st chakra:– Insecure people concerned / ē physical survival / sense ^ smell is dominant. element – earth, / grossest manifestation ^ reality. colour yellow. Problem :– violent behaviours arising from deeprooted insecurity sleep → 10 to 12 hrs at night, on their stomach.

JAN	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

The Plane ^ genesis, maya, anger, greed, delusion, conceit, avarice & sensuality. Mastering / 1st chakra → freedom from disease / abstain from lower desires & attachments.

2nd chakra: caught up in / perception ^ sense organs ([illegible]) Taste – dominant sensory mode – element water. colour – luminous white or light blue. Problems:– Corruption, disorder. Responsible for creative arts. sleep – 8 to 10 hrs:– foetal position. 2nd chakra contains 2 arrows – purify calm & mercy, 2 snakes, jealousy envy.

It contains / astral plane, / plane ^ fantasy & / plane ^ joy. mastering it, / yogi becomes beloved controls / elements. Illuminates like Sun well versed in prose, poetry, reasoned discourse, can control lustful desires.

FEB	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28

3rd chakra:— Recognition of ego.
search for immortality of embodied being.
sight - dominant sensory mode.
fire element. Red colour.

JAN 04 SAT

Problem:- exertion of power, imposing will of ego on others. +ve → organisational skill, altruistic use of power.
Sleep - 6-8 hrs - on his back.
Celestial plane - 3 arrows, selfless service, dharma, charity.
one snake - bad company. Plane of sorrow, good company, atonement & Karma.
by mastering of → destroy sorrow & disease gain knowledge of deep lokas, develop healing power. Stability, accumulation of power, accomplishment, command, control worldly achievement necessary to ground one's ego.
4th chakra - one become aware of karmas/behavioural patterns of one's life.
heart - seat of Prana - centre of 7 planes. 3 above, 3 below.

5 SUNDAY

Air - element.
Smoky grey green - colour.
sensing mode tactile.

JAN W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Problem - tendency to imbalance.
Faith (God) motivating force.
Sleeps on left side - 5 to 6 hrs.

JAN 06 MON

Plane of balance and of religion is arrow ē takes player higher.
Snake - irreligiosity back to delusion;
Plane of sanctity, fragrance, taste.
also purgatory, good tendencies, clarity of consciousness.
mastery of yogi becomes like [illegible], lord of speech. Senses are under control.
Inspired life. Poetry flows from speech uninterrupted like clear stream of water.
no enemies. Mastery over time & space.
5th chakra: Realise compassion, - chakra of gnana. Player becomes gnani, even ē out formal instruction & study. Constant, gentle steady, modest, courageous, free from disease & sorrow. Merciful to all - Has no expectation.
Problem - authoritarianism.
Centre of [illegible] -
Colour - Smoky purple.
meditates "[illegible]"
obsession - logic
boon - understanding

FEB S S M T W T F S S M T W T F S S M T W T F S S M T W T F
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

Intellect free from impurity ^ worldly pursuits! Can see past, present & future.
4–5 hrs sleep – changing sides.

JAN 07 . TUE

| human plane; knowledge ([illegible]) and [illegible] – | arrows. Ignorance | snake.
plane ^ [illegible], [illegible], [illegible] –
gains | understanding ^ energy ([illegible])
mastery:– Rejuvenate himself at will.
His presence opens one to | knowledge ^ | self, & in it one is able to understand | mysteries ^ nature & recognise | presence ^ divine knowledge in every existing phenomenon

6th, – Dominant concern is [illegible] – centre ^ [illegible] – | player has no problems (vibrating) in this [illegible] he is centred in | 3rd eye – meditates on [illegible] – | sound & his breath is heard as [illegible]. all duality dissolves. Beyond | realms ^ elements.

arrow – conscience
snake – violence.

[illegible] takes | player directly to Cosmic consciousness (from here)
mastery → psychic powers – all karmas are destroyed.

JAN W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

7th beyond pleasure & pain.
He becomes master ^ 8 siddhis. ([illegible] [illegible]) of this siddhis lead to egoism → or inertia ([illegible]) drawn him down to

JAN 08 WED

illusion → A new [illegible] (genesis) & play continues. | negative intellect is | snake | draws energy down to | level ^ | 2nd chakra
Radiant plane ^ [illegible] vibration.
8th [illegible]: beyond chakras. | seat ^ Cosmic Consciousness. | plane ^ absolute.

← always 292. ↔ 292×9 = 2628 [illegible] Compare [illegible]

Numerology ^ | game

72	71	70	69.	68.	67.	66	65	64
55	56	57	58	59	60	61	62	63.
54	53	52	51.	50	49	48	47	46
37	38	39	40	41	42	43	44	45
36	35	34	33	32	31	30	29	28
19	20	21	22	23	24	25	26	27
18	17	16	15	14	13	12	11	10
1	2	3	4	5	6	7	8	9

FEB S S M T W T F S S M T W T F S S M T W T F S S M T W T F
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

612 531 450 | 369 288 207 | 126 45. | Total = 2628

A numerologically balanced perfect rectangle

8 horizontal rows

JAN **09** THU

– 8 is / numbers [illegible Malayalam].
5 [illegible Malayalam] + [illegible Malayalam]
9 columns – vertical – [illegible Malayalam].
8 of [illegible Malayalam] + supreme consciousness.

72 squares making up / field of cosmic play. 7+2 = 9.

1st row total 45 (4+5 = 9)
2nd row total 126 – (1+2+6 = 9)
3rd row total 207 (2+0+7=9)
/ central vertical column – all 5s.
all other columns 2 basic numbers.
1st = 18 (1+8 = 9), 19 (1+9 = 10 = 1)
36 (= 9) & 37 (= 1), 54 (9) 55 = 1 –
72 = 9.
2nd vertical column 2 & 8 –
3rd " " 3 & 7
4th " 4 & 6 –
5th (middle) = all 5
6th – 4 & 6 –
7th 3 & 7
8th 2 & 8.

JAN W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

/ sum of each vertical column = 292. = 4. [2+9+2 = 13 = 1+3 = 4]
4 / number of rational organisation;

JAN **10** FRI

tangible achievement, tetramorphs; / forms square.

64 [illegible]	63 [illegible]	46 [illegible]	45 [illegible]	28 [illegible]	27 [illegible]	10 [illegible]	9 [illegible]
65 [illegible]	62 [illegible]	47 [illegible]	44 [illegible]	29 [illegible]	26 [illegible]	11 [illegible]	8 [illegible]
66 [illegible]	61 [illegible]	48 [illegible]	43 [illegible]	30 [illegible]	25 [illegible]	12 [illegible]	7 [illegible]
67 [illegible]	60 [illegible]	49 [illegible]	42 [illegible]	31 [illegible]	24 [illegible]	13 [illegible]	6 [illegible]
68 [illegible]	59 [illegible]	50 [illegible]	41 [illegible]	32 [illegible]	23 [illegible]	14 [illegible]	5 [illegible]
69 [illegible]	58 [illegible]	51 [illegible]	40 [illegible]	33 [illegible]	22 [illegible]	15 [illegible]	4 [illegible]
70 [illegible]	57 [illegible]	52 [illegible]	39 [illegible]	34 [illegible]	21 [illegible]	16 [illegible]	3 [illegible]
71 [illegible]	56 [illegible]	53 [illegible]	38 [illegible]	35 [illegible]	20 [illegible]	17 [illegible]	2 [illegible]
72 [illegible]	55 [illegible]	54 [illegible]	37 [illegible]	36 [illegible]	19 [illegible]	18 [illegible]	1 [illegible]

9 [illegible]

FEB S S M T W T F S S M T W T F S S M T W T F S S M T W T F
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

8 [illegible]

Introduction to Mathematical Philosophy.

Berhand Russell

A touchstone book published by Simon & Schuster.

Mathematics is a study e, when we start from its most familiar portions, may be pursued in either ʌ 2 opposite directions. / more familiar direction is constructive, towards gradually ʌing complexity, from integers to fractions, real no:s, complex numbers; from addition & multiplication to differentiation & integration & on to higher mathematics. The other direction e is less familiar, proceeds, by analysing, to greater & greater abstractness & logical simplicity.

It is / fact ʌ pursuing this opposite direction // characterises mathematical philosophy, as opposed to ordinary mathematics.

But it should be understood // / distinction is one, not in / subject matter, but in / state ʌ mind ʌ / investigator.

Early Greek geometers, passing from / empirical rules ʌ Egyptian land-surveying to / general propositions by e those rules were found to be justifiable, & thence

to Euclid's axioms & postulates, were engaged in mathematical philosophy, according to / above definition.

/ distinction between mathematics & mathematical philosophy is one e depends upon / interest inspiring / research & upon / stage ʌ / research has reached.

To / average educated person, / obvious starting point ʌ mathematics would be / series ʌ whole numbers 1, 2, 3, 4 ...... etc. Probably only a person c̄ some mathematical knowledge would think ʌ beginning c̄ 0, instead ʌ 1, but we will presume this degree ʌ knowledge & begin / series – 0, 1, 2, 3 ... n, n+1 ...... This is what is called / series ʌ 'natural numbers.

It is only at a high stage ʌ civilisation // we could take this series as our starting point. It must have required many ages to discover // a brace ʌ pheasants & a couple ʌ days were both instances ʌ / no: 2

/ degree ɾ abstraction involved is far from easy. And / discovery / 1 is a number must have been difficult. As for 0, it is a very recent addition. The greeks & Romans had no such digit. If we had been embarking upon mathematical philosophy in earlier days, we should have had to start c̄ something less abstract than / series ɾ natural numbers, c̄ we should reach as a stage on our backward journey.

All traditional pure mathematics, including analytical geometry, may be regarded as consisting wholly ɾ propositions about / natural numbers. --- That all traditional pure mathematics can be derived from / natural numbers is a fairly recent discovery though it had been long suspected.

Having reduced all traditional pure mathematics to / theory ɾ / natural numbers, / next step in logical analysis was to reduce this theory itself to / smallest set ɾ premises & undefined terms from c̄ it could be derived. This work was accomplished by Peano: He showed / entire theory ɾ / natural numbers could be derived from 3 primitive ideas & 5 primitive propositions in addition to those ɾ pure logic

JAN	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

JAN 15 WED

The 3 primitive ideas of Peano.
0, number, Successor.
Successor :– / next no: in natural order – Successor of 0 = 1.
Successor of 1 = 2.
number :– / class ɾ / natural number.
5 primitive propositions:–
(1) 0 is a number
(2) Successor of any number is a number
(3) no two numbers have / same successor.
(4) 0 is not a successor ɾ any number
(5) Any property c̄ belongs to zero & also to successor of every number, c̄ has / property belongs to all numbers.

/ last ɾ these – "/ principle ɾ mathematical induction". By mathematical Induction every number belongs to / series 0, 1, 2, 3 ---- n, n+1 ----
Peano represents last perfection ɾ / 'arithmetisation' ɾ mathematics.

FEB	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28			

Pythagoras who believed that not only mathematics, but everything else could be deduced from numbers; he was the discoverer of the most serious obstacle in the way of what is called arithmetising mathematics. He discovered the existence of incommensurables; the incommensurability of the side of a square & its diagonal. If the length of side is 1 inch, the diagonal = √2 inches. But √2 is not a number at all. The problem was solved only in our day, by the help of the reduction of arithmetic to logic; ...

Frege 1st succeeded in logicising mathematics – i.e. in reducing to logic the arithmetical notions which his predecessors had shown to be sufficient for mathematics.

A series of the form
$x_0, x_1, x_2, \ldots x_n \ldots$
in which there is a first term, a successor to each term (so that there is no last term) no repetitions, & every term can be reached from the start in a finite no: of steps is called a Progression. Every progression verifies Peano's 5 axioms.

Any progression may be taken as the basis of pure mathematics. We may give the name '0' to its 1st term, the name number to the whole set of its terms, & the name successor to the next in progression. The Progression need not be composed of numbers. It may be composed of points in space, moments of time, or any other terms of which there is an infinite supply.

definition of number:– Number is what is characteristic of numbers, as man is what is characteristic of men.
no: 3 is not the same as a trio consisting of Brown, Jones & Robinson. The number 3 is something which all trios have in common, & which distinguishes them from other collections.
Instead of speaking of a 'collection', – a 'class', a 'set', or "aggregate". This can be defined in 2 ways.
(1) we may enumerate its members – the collection I mean is Brown, Jones & Robinson. (2) speak of a defining property as "mankind" or "inhabitants of London" etc. Definition which enumerates is called a definition by extension, & one which mentions a

defining property — definition by intension.
/ latter is logically more fundamental.

JAN 18 SAT

Definition by extension is not necessary to knowledge about a class. When we come to consider infinite classes we find that enumeration is not even theoretically possible for beings who only live for a finite time. We cannot enumerate all / natural numbers ... At sometime we must content ourselves with "and so on". We cannot enumerate all fractions or all irrational numbers or all of any other infinite collection. Thus our knowledge in regard to all such collections can only be derived from a definition by intension.

Relation: — "one-one", one-many, many-one.

Christian countries — husband to wife — one-one relation.

Mohammadan — one-many.

Tibet — many-one.

19 SUNDAY

Relation of father to son = one-many

Son to father — many-one

eldest son to father — "one-one".

n to $n+1$ = one-one.

n to $2n$ or $3n$ = one-one.

n to n^2 = one-one.

when −ve numbers are admitted it becomes two-one, since n & $-n$ have

JAN 20 MON

/ same square.

{ Two classes are said to be similar when there is one-one relation, one class is / domain & / other is / converse domain.

(1) every class is similar to itself.

(2) If / class α is similar to class β, β is similar to α.

(3) If α is similar to β & β to γ, α is similar to γ.

1st — reflexive relation

2nd — symmetrical relation

3rd — transitive relation.

It is obvious / a relation which is symmetrical & transitive must be reflexive throughout its domain.

First hide of mathematical induction :—

A property is said to be 'hereditary' in / natural no. series, if whenever it belongs to a no. n, it also belongs to $n+1$, / successor of n.

A property is said to be inductive when it is a hereditary property which belongs to zero.

Similarly a class is inductive when it is a hereditary class of which 0 is a member.

JAN 23 THU

The natural numbers are / posterity of 0 c respect to / relation immediate predecessor (/ converse ^ successor)

A class c has no members = null class.
0 is / class whose only member is / null-class.

Difficulty c / proposition — no 2 numbers have / same successor.

Say / total no: individuals in / universe is 10. Then there would be no class ^ 11 individuals. Then 11 will become / null class. So would be 12. Thus we should have 11 = 12. Therefore / successor ^ 10 would be / same as / successor ^ 11 although 10 is not / same as 11. Thus we have 2 diff. no:s c / same successor. This difficulty will not arise, if / no: ^ individuals in / world is not finite.

0 = [illegible]. n = [illegible] — n+1 [illegible] ([illegible] ......)

0	n	n+1
[illegible]	[illegible]	[illegible]
	[illegible]	

Explain.

JAN	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

JAN 24 FRI

natural numbers are defined as / posterity ^ zero.
0 = ancestor. n & n+ — posterity. hereditary relation. ∴ properties ^ 0 in all / natural numbers (^ [illegible] in [illegible] — in all human beings, properties ^ God)

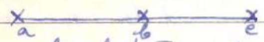
/ phrase 'inductive numbers' to / same set spoken ^ as 'natural numbers'.
Mathematical induction affords / essential characteristic by c / 'finite' is distinguished from / infinite. / principle ^ math. induction might be stated popularly in some such form as "what can be inferred from next to next can be inferred from first to last". This is true when / no: ^ intermediate steps between 1st & last is finite, not otherwise.

Notion of order:—
we can no longer 'arrange' / natural numbers than we can / starry heavens. Just as we may notice among / fixed stars either their order ^ brightness or their distribution in / sky, so there are various relations among numbers — may be observed, & c give rise to various diff. orders among no:s, all equally legitimate. What is true ^ numbers is equally true ^ points on a line or ^ / moments ^ time. One order is more familiar, but others are equally

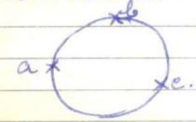
FEB	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28

valid.

Given any 3 points on a straight line in ordinary space one of them must be "between" the other 2. This is not the case with points on a circle, or a closed curve, because on a circle we can travel from one point to other with out passing thro the 3rd. In fact the notion 'between' is characteristic of open series — or series in the strict sense — as opposed to what may be called cyclic series.



b between a & c.

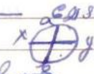


In cyclic order, we need a relation of 4 terms which may be called separation of couples. Consider a journey round the world.

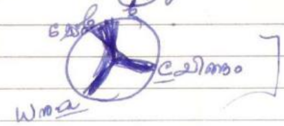
From England to New Zealand — by way of Suez or by way of San Francisco.

Take 4 points on a circle — 2 couples — a & b & x, y. From a to b one has to pass through either x or y (suppose) from x to y [illegible] through either a or b. The couple a b are separated by the couple xy. Out of this relation a cyclic order can be generated in a way resembling that in which we generated an open order from 'between' but somewhat more complicated.)

[explain — [illegible], [illegible] couples.



or



]

The Cantorean Infinite is of the greatest & most fundamental importance. The understanding of it opens the way to whole new realms of mathematics & philosophy. It will be observed that 0 & infinity, alone among ratios are not one - one. Zero is one-many - Infinity is many-one.

Real numbers :– Segment ı / series ı ratios in order ı magnitude.

JAN 28 TUE

Irrational number :– Segment ı / series ı ratios ē has no boundary.

Rational real number :– Segment ı / series ı ratios ē has a boundary.

The rational real number consists ı all ratios less than a certain ratio & it is / rational real number corresponding to // ratio. / real number 1, for instance, is / class ı proper fractions.

" No 2 numbers have / same successor" — this is only to say // / relation is a "one – many."

" 0 is a number" – / same as " / member ı / domain ē is not a member ı / converse domain is a member ı / domain". We will call this member / 1st term.

" / successor ı any number is a number". every member ı / domain is a member ı / posterity ı / 1st term. Hence / successor ı a member ı / domain must be a member ı / posterity ı / 1st term & ∴ a member ı /

domain, because by / definition / posterity ı / 1st term is / same as / domain.

JAN 29 WED

" 0 is not / successor ı any number" becomes " / The 1st term is not a member ı / converse domain".

{ The 5th proposition ı mathematical induction becomes " Every member ı / domain belongs to / posterity ı / 1st term."

domain = fields.

I Commutative law =

$$\alpha + \beta = \beta + \alpha \quad \text{and}$$
$$\alpha \times \beta = \beta \times \alpha .$$

II Associative law =

$$(\alpha + \beta) + \gamma = \alpha + (\beta + \gamma) \quad \text{and}$$
$$(\alpha \times \beta) \times \gamma = \alpha \times (\beta \times \gamma)$$

III Distributive law.

$$\alpha(\beta + \gamma) = \alpha\beta + \alpha\gamma .$$

IV The law ı exponentiation.

$$\alpha^{\beta} \cdot \alpha^{\gamma} = \alpha^{\beta+\gamma},$$
$$\alpha^{\gamma} \cdot b^{\gamma} = (\alpha b)^{\gamma},$$
$$(\alpha^{\beta})^{\gamma} = \alpha^{\beta\gamma}.$$

All these laws hold for cardinals (whether finite or infinite) & for finite ordinals whereas

come to infinite ordinals some hold & others not.
Commutative law does not hold.
Associative law hold
distributive law holds ñ / form

$$(\beta+\gamma)\alpha = \beta\alpha + \gamma\alpha$$

but not in / form $\alpha(\beta+\gamma) = \alpha\beta + \alpha\gamma$
/ exponential laws

$$\alpha^{\beta} \cdot \alpha^{\gamma} = \alpha^{\beta+\gamma} \text{ and } (\alpha^{\beta})^{\gamma} = \alpha^{\beta\gamma}$$

still hold, but not / law

$$\alpha^{\gamma} \cdot \beta^{\gamma} = (\alpha\beta)^{\gamma}.$$

ē is obviously connected ē / commutative law for multiplication.

Limit & Continuity.

minimum. maximum.

The axiom of Infinity & logical types :—

The axiom of infinity is an assumption ē may be enunciated as follows :— If n be any inductive cardinal number, there is at least one class of individuals having n terms.

Assuming / no. of individuals in / world is n, / no: of classes of individuals will be 2^n. 2^n is greater than n. [illegible] / no: of classes in / world is greater than / no: of individuals.

If 9 individuals — $2^9 = 512$ will be / no: of classes. The first no: to be null will be 513.

If we advance to classes of classes we shall do still better. / number of them will be 2^{512}, a number ē is so large as to stagger imagination, since it has about 153 digits.

advance to classes of classes of classes —
(number ē 153 digits)
$2^{[illegible]}$. The number of digits in this no: will be 3 times 10^{152}.

As regards ratios we have a very / restatement of affairs.

If / no: of individuals n. we form / complete set of individuals, classes, classes of classes, etc all taken together / no: of terms in our whole set would be

$$n + 2^n + 2^{2^n} \text{ ...... ad infinitum}$$

ē is $\aleph_0$. (aleph null) Thus taking all kinds of objects together & not confining to objects of any one type, we shall certainly obtain an infinite class, & shall ∴ not need / axiom of infinity.

Some thing reminds one of / Conjurer who brings things out of a hat. There was not a live rabbit in it before, — At a loss to say how / rabbit got there. So / reader, if he has a robust sense of reality, will feel convinced

"It is impossible to manufacture an infinite collection out of a finite collection of individuals."

FEB **01** SAT

/ fallacy involved here is / fallacy which may be called "confusion of types".

Contradiction of / greatest cardinal in Cantor's theory — The no: classes is greater than / no: of members of / class & // there is no greatest cardinal number.

But if we could add into one class / individuals, classes, classes of classes of individuals, etc we should obtain a class of which its own subclasses would be members. The class consisting of all objects that can be counted have a cardinal no: i.e. is / greatest possible. Since all its subclasses will be members of it, there cannot be more of them than there are members. Hence we arrive at a contradiction.

but if n = no: of individuals

2 SUNDAY

2^n = classes.

We cannot form a new class consisting of both individuals & classes & having $n + 2^n$ members. In this way / attempt to escape from / need for / axiom of infinity breaks down.

FEB	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	✿	✿	✿
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	✿	✿	✿

We cannot prove / existence of infinite numbers & classes by such conjurers methods as we have been examining.

([illegible] FEB **03** MON [illegible])

Bolzano & Dedekind :— An object is not identical with / idea of / object. but there is an idea of any object.

(A single man is not humanity)

/ relation to an object to / idea of it is one one; / class of objects & / class of ideas are both infinite.

Dedekind := "Meine Gedankenwelt" — meaning = "The world of my thoughts."

If idea is to be understood logically it may be identical with / object, or it may stand for a "description".

In / former case / argument fails because it was essential to / proof of reflexiveness // object & idea should be distinct. In / second case also it fails because / relation of object & description is not one - one. There are innumerable correct descriptions of one given object.

eg: Socrates :— "Master of Plato"
" Philosopher who drank hemlock"
" Husband of Xantippe"

([illegible] — Comparable)

MAR	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

There are innumerable beliefs & attitudes each 1 e could be called an idea of the object in the sense in e we might say 'my idea 1 Socrates is quite different from / yours'; but there is not any central entity (except Socrates himself) to bind together various "ideas of Socrates".

[Socrates [illegible] God [illegible] Substitute [illegible] fanaticism [illegible] solution]

Page 160

→ It might be thought that whatever may be said 1 logical arguments / empirical arguments derivable from space & time, / diversity 1 colours etc are quite sufficient to prove / actual existence 1 an infinite no: of / particulars. I [Russel] do not believe this. / We have no reason to believe in / infinite extent 1 space & time. Space & time are physical facts, not mathematical fictions. We regard them as continuous or at least as compact. But this is prejudice. / Theory 1 quanta in physics illustrates / fact // physics can never afford proof 1 continuity though it might quite possibly afford

disproof. / Senses are not sufficiently exact to distinguish between continuous motion & rapid discrete succession, as anyone may discover in a cinema. A world in e all motion consisted 1 a series 1 small finite jerks would be empirically indistinguishable from one in e motion was continuous.

141. — . It follows // there is no empirical reason for believing / number 1 particulars in / world to be infinite & there never can be; also, there is no empirical reason to believe / no: to be finite, though it is theoretically conceivable // some day there might be evidence pointing, though not conclusively, in that direction. ([illegible])

from / fact /// infinite is not self contradictory, but is also not demonstrable logically we must conclude // nothing can be known a priori as to whether / no: 1 things in / world is finite or infinite. To conclude — adopt a Leibnizian phraseology, // some 1 / possible worlds are finite, some infinite — we have no means to know to e 1 these 2 kinds, our actual world belongs. / axiom 1 infinity will be true in some possible worlds & false in others.

Subject – object.
Brutus killed Caesar.
Grammatically Brutus is subject, Caesar

FEB 06 THU

object. But this is irrelevant since / same
occurrance expressed as "Caesar was killed by Brutus" — Caesar is grammatically subject. ∴ using / word 'subject' in a generalised sense, both Brutus and Caesar are subjects ^ this proposition.

"Killed" A relation holding 2 subjects. "Killing is a relation which holds between Brutus & Caesar" Here / apparent verb "killing" (relation) has become / subject.

"Proper names" — terms ē can occur only as subjects in propositions.
Individuals & particulars:– Objects // can be named by proper names. There is an endless regress. What appears as a particular is really, on close scrutiny, a class or some kind ^ complex. If this be / case, / axiom ^ infinity must ofcourse be true.

If to / no: ^ particulars or individuals // / axiom ^ infinity is assumed to apply –

If it is true ^ them, it is true ^ classes ^ them, & classes ^ classes ^ them & so on,
There is no known method for discovering whether it is false or true.

FEB 07 FRI

Theory ^ Deduction:– 3 topics will concern us before we reach / theory ^ classes, namely
1. The theory ^ deduction
2. The propositional function
3. Descriptions.

Mathematics is a deductive science. Start from a premise – by process ^ deduction arrives at theorems ē constitute it.

In deduction we have one or more propositions called premisses, from ē we infer a proposition called conclusion. When there are several premisses, they are amalgamated into a single proposition so as to be able to speak ^ / premiss as well as ^ / conclusion. Thus deduction is a process by ē we pass from knowledge ^ a certain proposition, / premiss, to knowledge ^ a certain other proposition, / conclusion. We shall not regard such a process as logical deduction unless it is correct i.e. unless there is such a relation between premiss & conclusion // we have a right to believe / conclusion if we

known premises to be true.
Implication. / premiss implies conclusion. ∴ / relation between them is an implication.

Disjunction. P or Q.
Conjunction P & Q.
Incompatibility :- P & Q are not both true. This is a negation ɾ conjunction. It is also / disjunction ɾ / negation ɾ P & P.
Implication. P implies Q, or If P, then Q. ([illegible] [illegible])
Propositional function.
/ Proposition — A form ɾ words which express what is either true or false. / word proposition should be limited to "symbols".
$2+2 = 4$. (true proposition)
$2+2 = 5$ (false ")
Socrates is a man (true P.)
" is not a man (false Prop.)
Propositional function :- An expression containing one or more undetermined constituents such // when values are assigned to these constituents / expression becomes a proposition. It is / function whose values are propositions. /
eg = x is human.

So long as x remains undetermined, it is neither true nor false, but when a value is assigned to x it becomes a true or false proposition. Any mathematical equation is a / propositional function.
Descriptions:
A description may be ɾ 2 sorts, definite & indefinite (or ambiguous). An indefinite description is a phrase ɾ / form 'a so-and-so' and a definite description is a phrase ɾ / form '/ so-and so' (in / singular)
" who did you meet?"
" I met a man".
"That is a very indefinite description".
"I met a unicorn" — unicorn must be only a concept. / element ɾ unreality confronts us at this point.

I met Jones.
I met a man. | all propositions
I met a unicorn | but ɾ different kinds.

For want ɾ / apparatus ɾ propositional function many logicians have been driven to / conclusion // there are unreal objects. Meinong argued // we can speak about / golden mountain, / round square and so on. [illegible] subject [illegible] propositions [illegible] [illegible].

[illegible] logic must no more admit a unicorn than zoology can. for logic is concerned ē / real world just as truly as zoology, though ē its more abstract & general features.

(e.g.:- [illegible], [illegible] etc - Refer [illegible])

Hamlet exists in / world ^ Shakespeare's imagination. (not like Napoleon in / real world) / imagination & thoughts ^ Shakespeare are real, thoughts & feelings ^ / reader ^ Shakespeare are real, but there is not an objective Hamlet.

When you have taken account ^ all / feelings roused by Napoleon in writers & readers ^ history, you have not touched / actual man. But in / case ^ Hamlet, you have come to / end ^ him. / Sense ^ reality is vital in logic; A robust sense ^ reality is very necessary in framing a correct analysis ^ propositions about unicorns, golden mountains, round squares & other such pseudo-objects.

In dealing ē propositions we are dealing ē symbols.

A unicorn is an indefinite description c describes nothing. It is not an indefinite description c describes something unreal.

Socrates is <u>a</u> man.
Plato is <u>a</u> man.
Aristotle is <u>a</u> man.

If it is a man it is one definite man not any other. Whatever there is in / world is definite. Thus there cannot be such an entity as "a man" to be found in / world, as opposed to specific man.

Scott is <u>the</u> author of Waverley.

We have a name Scott, a description author ^ Waverley, c are asserted to apply to / same person.

A name is a simple symbol whose meaning is something / can only occur as subject, something ^ / kind / we defined as an individual or a particular.

A simple symbol is one c has no parts / are symbols. ([illegible])

Scott is a simple symbol. Though it has separate letters as its parts, these parts are not symbols. / author ^ Waverley is not a simple symbol, / separate words / compose / phrase are parts c are symbols.

We may enquire significantly whether Homer existed, [illegible] we would not do if Homer were

a name. If 'a' is a name, it must name something. What does not name anything is not a name. When we ask whether Homer existed,

we are using the word 'Homer' as an abbreviated description. We may replace it by "/ author ^ / Illiad & / Odyssey".

The theory ^ description is ^ utmost importance both in logic & in theory ^ knowledge. But for purposes ^ mathematics / more philosophical parts ^ / theory are not essential, & have therefore been omitted in / above account, ē has confined itself to / barest mathematical requisites.

Classes:-

Concerned ē "the" in / plural.
The inhabitants ^ London, the sons of rich men etc. In other words concerned ē classes.
A cardinal no: is to be defined as a class ^ classes. No: 1 is to be defined as / class ^ all unit classes, i.e ^ all // have just one member.
"The combination ^ n things m at a time" represents a class of classes, namely / class ^ classes of m terms // can be

selected out ^ a given class ^ n terms. Without some symbolic method ^ dealing ē classes ^ classes, mathematical logic would break down.

In defining / posterity ^ a given term, we need to be able to say // a member of the posterity belongs to all hereditary classes to ē / given term belongs, & this requires / sort of totality // is in question.
"All men are mortals".
This statement involves / functions "x is human" & "x is mortal." It involves / classes men & mortals.
Mathematics & Logic :— historically speaking, they have been entirely distinct studies. Mathematics connected ē science, Logic ē Greek. In modern times mathematics have become more logical, & logic more mathematical. It is impossible to draw a line between / 2. In fact / 2 are one. They differ as boy and man.
Logic is / youth of mathematics & mathematics is / manhood of logic. (Page 194)
Traditional logic says - All men are mortals. Socrates is a man. ∴ Socrates is mortal.
"If all men are mortal, & Socrates is a

mans, then Socrates is mortal".

If all α^s are β^s and x is an α, then x is a β.

FEB 15 SAT

all α^s (men) = β^s (mortals)

x (Socrates) = α (man)

$\therefore$ x (Socrates) = β (mortal)

203-204 Among possible worlds in / Leibnizian sense, there will be worlds having 1, 2, 3 - - - - individuals, there does not even seem any logical necessity why there should be even one individual, why in fact there should be any world at all. .... The existence of a world is an accident i.e. it is not logically necessary. - - - - If there were no universe, all general propositions would be true. for / contradictory of a general proposition is a proposition asserting existence, & would therefore always be false if no universe existed.

16 SUNDAY

Definition of tautology :- "/ importance of tautology for a definition of mathematics was pointed out to me by my former pupil Ludwig Wittgenstein / who was

FEB	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	☼	☼	☼
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	☼	☼	☼

working on / problem. I do not know whether he has solved it, or even whether he is alive or dead." (FN on page 205)

FEB 17 MON

At / edge of psychology. Essays in Politics & culture - Ashis Nandy Oxford University Press. 1990 Edition.

Sati : Manu & Yajna Valkya → recommended a chaste life for widows. Kautilya → allowed widows to remarry under certain circumstances: It was in 2nd or 3rd century AD // Sati was 1st recommended in Vishnu Dharma Samhita & it was in medieval India // sati began to gain a new legitimacy / popularity declined after the middle ages. By 17th century / practice had become mainly voluntary & took place generally during times of war when it became difficult to protect women. By / beginning of 18th century it had become a rare occurrence (Page 3)

End of 18th century → In Bengal - suddenly it acquired / popularity of a cultural orgy. The burning was invariably preceded by Kali Puja.

MAR	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M
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Economic historians argument :— A primitive Malthusian means of population control in famine ridden Bengal.

1770, $\frac{2}{5}$ of Bengalis died of famine.

Upper caste Bengali Bhadraloks :— Rudderlessness due to colonial system — / land settlement system displaced / B Bcoz of aristocracy with a gp of BBcoz of who had deprived / identity to enter commerce — a profession typically / low caste. (Page 4)

Of / 11% of their population of Bengali Hindus / 55% of sati occured. 89% of lower caste hindus → 45% only. (that too from upwardly mobile, sanskritising sections of / lower caste) / sati was becoming popular among / urban nouveaux riches who had lost part of their allegiance to older norms & had no alternative commitments to fulfil / void.

Marshman (christian missionary) : "/ increasing luxury of / high and middling classes — & their expensive imitation of European habits made them eager to avoid / cost of maintaining widows". Rammohan Roy too considered economic gain to be / official explanation of / sati.

Rajaram Mohan Roy born in 1772 in a "nuclear family" — A family of urban bureaucrats (Page 13)

Frontiers of [illegible]

Dr. C. Dayakar Reddy,
CDR Hospital,
Hyderguda,
Hyderabad.

To
The M.D
Medicity hospitals
Sarovar centre
Opp Secretariat
Hyderabad

Abhilash's Poems

Darkness

Father,
With you I thought
I had turned
the corner of death
as easily as the bus
Campus-bound, lights put out.
Taking a U-bend
at night.

In that darkness
I learnt an old lesson
That you once taught me
The body, its pains, its aches,
loneliness....
I respected it all
a silent atonement.
In the darkness alone
we communicate
as I direct my tears, thoughts
to its heaven bound quest.

But do I dare admit
That I used you
only yesterday.
Like a mother using the alphabet
with her kindergarten kid
you were my alphabet
to explain her the concept called death.

Isn't it strange
that I became Shelley's verse
Coleridge's lute, Tagore's flute
that breaks the news of your presence
to her routine world.

On her face
the press reports
that came day after day
sudden floods and then
the raising of a dam.
and when she opened a diary
I saw scribbled on it
words, which I thought

FEB **22** SAT

Could be dedicated to you
We use words to conceal
more than what we reveal
Father,
we seem to be going round
in circles.
you can't escape me
nor can I, you...

He came back from Konark

He came back
with the Sun's wheel
said it was made of stone
and placed it in my hand.

when my God chose
23 SUNDAY to conceal the Cosmos
in mouth
how can I brazenly
flaunt it in Palms
Isn't revelation always a

FEB S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

FEB **24** MON

mother's privilege.
He now thrust it
into my hands
and placed it on the table
where I write.
There it stands
flanked by the Lord of Guruvayoor
on one side
and a time piece
on the other.

MAR S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S M
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Men & movements in American Philosophy

FEB 25 TUE

Joseph. L. Blau.

Prentice Hall, Inc. New York.

Second Printing June 1953.

Prelude.

Puritans belonged in their theology to / Covenant theory of / Calvinist branch of / Protestant trunk growing out of / Christian root. They maintained a Congregationalist view of church govt. This view required // individual churches should be small in size, completely independent of all other churches, self-constituted by a membership of Saints, & not established by any superior ecclesiastical authority.

In / Cambridge platform of 1649, E defined saints as those who have attained a knowledge of / principles of religion, whose lives are free from gross & open scandals, who have made public profession of their faith & repented of their sins, & having done so, lead thereafter a blameless life.

Since / saints, by covenanting together created / church organisation, in / final analysis

FEB 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

it was upto / saints to decide whether any of action fell own scope of / covenant. This is an apparently democratic aspect of Puritan church Govt. In practice, this worked out as an aristocratic rather than democratic method.

FEB 26 WED

Small wonder it is to find / system described by Samuel Stone as a 'speaking aristocracy in / face of a silent democracy'.

Puritans believed in / mind of God, prior to material creation, there was a rational & wellstructured scheme of ideas to serve as / grand plan or blue print of / creation & of all / subsequent events. God, said Samuel Willard 'contrives in his mind an eternal idea of all things // are to be'. Not only / beginning of universe & its operating principles, or natural laws, but / precise destiny of everything in / universe, & / place of these multi-farious activities in an overarching cosmic scheme, was thought to be included in God's master plan. Thus history was sacred drama. It started as an idea in God's mind. God was not merely / dramatist, / director & / audience but at every moment / central figure. / Puritan universe was God-centred. /

MAR 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

1. Colonial materialism & Immaterialism.

9–
Colonies discover Locke & Newton :– /
Puritan Colonials were not creative scientists but absorbers ^ science. They mastered / new astronomy – / Copernican System ..... The interest behind / study was not an interest in / heavens as such. It was / heavens as / work ^ God. After 1679 astronomical observation became a possibility for American students when Harvard was given a telescope by / younger John Winthrop. This was / telescope used by Thomas Brattle in observing / Comet ^ 1680. Brattle's reports were used & acknowledged by Sir Isaac Newton.

10:
Locke argued // / mind ^ man prior to experience was like a completely blank tablet of wax, able to receive impressions from / world outside itself only by way ^ / senses. There was no mental content ō & men were born. There were no innate ideas. Man's mind could contain no idea ^ anything in / external world unless it entered through / avenue ^ perception.

11. Newton concerned himself c / working out ^ a consistent scheme ^ natural causes to explain what men experience.
Merle Curti's estimate ^ Locke as 'America's philosopher' is valid for / 18th century.

There were fewer competent Newtonians than Lockeans in / colonies, because an advanced knowledge ^ mathematics was necessary for / full understanding ^ Newton's Scientific work. F. E. Brasch, an able historian, refers to / pre-revolutionary pd as / 'Newtonian epoch' in / american colonies.
12–13:– Edwards realised, as did Berkeley, // Locke's arguement against / objective reality ^ / secondary qualities applied to our experience ^ / primary qualities as well. What we can know as a result ^ our sensations is never / qualities as they exist 'out there', but only / idea or impression c / sensations implant in our minds. The world as we know it can only be a world ^ ideas, c we can know, not ^ things, c we cannot know. The primary qualities ^ figure, motion, extension, & solidity [c] Locke left outside / mind as qualities ^ material substance, Edwards reduced to resistance or modes ^ resistance. Solidity is itself resistance. figure is / ending ^ / resistance. Extension is one aspect ^ figure. / Motion is / communication ^ resistance from

MAR 01 SAT

space to space. If then, Edwards could prove // resistance does not exist outside / mind, he could establish his philosophic position as an Immaterialism based upon a complete denial ^ our knowledge ^ matter

14. Newton led Edwards to elaborate an Immaterialism opposite // e he derived from Locke. Edwards drew / conclusion // space is not a physical being, but rather that it is "necessary, eternal, infinite & omnipresent." But I had as good speak plain. I have already said as much as // space is God."

16. Johnson did not forget what he had learned from Newton. he tried, to translate arts / language ^ his new philosophy. He asserted // Newton's concept ^ 'inertia' e Johnson prefered to called resistance, must be a direct action ^ God upon / mind ^ man. Colden disputed this point because he conceived of matter as an active force while Johnson insisted on / passivity of matter. Colden & Johnson / although both took their start

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from Newton, were worlds apart. Johnson's version, like / ^ Edwards, was Immaterialistic, insisting on / exclusiveness ^ spiritual agency. Colden's was materialistic insisting on / activity of matter as well as of

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spirit.

The Idealism ^ Johathan Edwards:

17. Perception is central to all human knowledge ---- / religious ideas proclaimed by Edwards were, rather, a translation ^ puritan doctrines in terms ^ / religious experience ^ / individual. Edwards's version ^ puritanism was a psychological version. His concern was to show / why men should feel a sense ^ their 'total / dependence' upon God rather than to demonstrate // men are actually entirely dependent upon God.

18. The mind ^ man has 2 faculties, / understanding & / inclinations, e sometimes are called 'heart' and sometimes 'will.' These are both natural faculties or powers ^ / mind and are served by / senses, / imagination, / memory & / judgement. / Senses are / primary servants ^ mind. There can never be any idea, thought or act ^ / mind, unless / mind ist received some idea from sensation.

19. Edwards suggested // we need not restrict ourselves to / 5 natural senses.... / five natural senses are supplemented by a moral sense e perceives right & wrong. Some men have a supernatural sense, bestowed upon them by an act ^

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divine grace. By the exercise ʌ this, their minds have / simple ideas ʌ heavenly influences far here.

19. What is lacking in most men is / supernatural sense e̲ is God's gracious gift to / elect, / saints, whose affections are thereby made gracious.

19-20: / experience e̲ / saints possess are not natural. It differs from natural experience not only in degree but also in kind. / gracious affections ʌ / saints have a supernatural source. There is some new idea in / minds ʌ / saints, e̲ was not in their minds before sanctification & e̲ is not in / minds ʌ / unsanctified.

20. / new power or sense ʌ / saint e̲ enables to perceive / new supernatural idea must come from God . . . . natural goodness e̲ is / living ʌ a moral life, & supernatural godliness, e̲ is / living ʌ a christian life, are totally distinct.

21. Edwards had pondered Newton & as a result maintained // everything finite must have a cause.

22 Edwards speaks ʌ humanity as a great tree, & asserts // since Adam, / root ʌ // tree (ē many branches) was deprived ʌ original righteousness, / branches should come forth ē out it.

22-23 — God implanted in Adam 2 sets ʌ principles — natural, supernatural.

natural principles — inferior & subordinate — summed up as principles ʌ self love.
supernatural — superior, — "divine love" or benevolence. When Adam fell, / supernatural principle ʌ benevolence was removed — He was left ē only self love as his motive.

23 Edwards identify self-interested action ē sin. Disinterested benevolence → is / essence of virtue. Virtue is a kind ʌ beauty ... of / mind.

The activity ʌ matter - Cadwallader Colden:

28:- A thinker most concerned ē Newtonian mathematics (theory ʌ fluxions) & Newtonian Physics (theory ʌ gravitation) - A deep & abiding distrust ʌ / method ʌ authority in intellectual matters — (/ cornerstone ʌ medieval education known as scholasticism)
A medical practitioner.

29 - / germ ʌ Colden's contribution — is Newton's statement of gravitation is not a cause but a name for a class ʌ observed effects ʌ some unknown cause.

Newton realised // gravitation was a word meaning / "mutual attraction ^ bodies". To say gravitation is / cause ^ mutual attraction ^ bodies would be equivalent to

saying // bodies are mutually attracted because they are mutually attracted.

Colden distinguished 3 powers in matter.
① moving power - principle ^ motion which is light
② power ^ resistance or inertia ē is matter as / term is commonly understood.
③ ether - / elastic power / medium ē harmonits movement & resistance, - making possible action at a distance.

30. Colden said // "if matter is passive, there is no possible way ^ knowing it". It is not entirely inert & passive. In order to be perceived matter must be active & dynamic.

31. Colden took / position // all knowledge is limited to things in time & space. & these things to be known, must be active. & // what we call 'knowledge' is our perception ^ / action ^ things. for him, matter is expressed & known as energy, as force. / energies, forces or powers of resistance, motion, & elasticity distinguish / 3 basic activities ^ matter,

or ways in ē matter is known. Thinking too is a kind ^ action. He recognised a mental or spiritual agency & a material agency. But he was not a materialist.

Matter is his name for certain types ^ activity. Spirit is his name for other types ^ activity.

32. Morality he defined as / art & science ^ living so as to be happy. ... knowledge is a prerequisite ^ morality!

33. For him, as for Socrates, virtue is knowledge. / more knowledge a man has / more sensible he will be ^ / benefits ^ morality. Colden, then was a hedonist. Morality to him was / art ^ happiness. He pointed out // / 'inspired writers', those who composed / scriptures, often used / motive ^ pleasure to urge people to / living ^ a moral & religious life.

34. Colden was a deist. He proved from / design & harmony ^ / universe, / existence ^ a designer or harmonizer.

35. A time when no matter existed is inconceivable..... He insisted on / eternity ^ matter as a corollary ^ / infinite wisdom ^ God.

2. American Enlightenment:

characteristic ideas ^ / Revolutionary era - 2nd ½ ^ 18th century → / Era ^ American Enlightenment.

36. There was no cleavage between philosophy & religion, religion & science, politics & economics as it is today.
37. There was a reliance on / power & reach ^ / human mind, & a belief / by / use ^ mathematical method, reasoning deductively from secure principles to secure conclusions, men might expand their knowledge indefinitely ē out / need ^ / supernatural aid. ..... A cosmopolitan ideal ^ world citizenship.
38. If poetry is emotion recollected in tranquility philosophy might not inaptly be described as thinking remembered in abstraction from / behaviour in / course ^ ē it arose.
39. For / enlightenment nature was beautiful, God was good & natural law had replaced divine intervention as a principle ^ explanation. God was / great engineer who had created in nature, for / benefit ^ man, a perfect machine ē functioned independently ^ its creator.

Enlightened politics. Thomas Jefferson:—

47. Jefferson was profoundly influenced by / currents ^ thought ē flowed from / works ^ Newton. Intelligence is innate in all men. Restrictions ^ various sorts, prevent men from utilizing this intelligence. once / restrictions are overcome, / rate ^ progress would ↑ in science, arts, human relations, govt & until in / end men are completely governed by reason. to this end, / state ... all man are completely reasonable is what is meant by / word "happiness".

48. Human nature is innately good, not sinful. Evil impulses are / exceptions, not / rule. Education & appeal to reason should suffice, ē out / introduction ^ supernatural terror to return evildoers to / natural path ^ goodness.
49— Natural rights — freedom ^ thought, ^ religion, ^ speech, ^ communication, ^ / press, ^ trade, ^ personal freedom; self government.
social or civil rights:— / right to property.
51:— Government is best ē governs least.
In order to stabilise / govt:— advocate popular education.
53.— Neither heredity nor wealth give one / title to aristocracy. / only type ^ aristocracy / Jefferson admits / — natural aristocracy.
54.— A society ^ farmers was Jefferson's ideal ^ classless society.
54-54 — his 3 great achievements — Declaration ^ Independence, Act ^ establishing Religious freedom, founding ^ University ^ Virginia.

No civilized nation can be both ignorant & free.

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Enlightened Outpost :- Thomas Paine.

55:- Jeffersonian ideal was of a free minds in a free society. Paine was a publicist, popularizer & propagandist of freedom.

56- He was interested in science - on Newtonian astronomy.

57- order & regularity in nature. "Nature is no other than laws creator has prescribed to matter."

58:- Rediscover moral harmony of universe.

64. go beyond superstition. found his religion on reason. "My own mind is my own church."

Revelation & God in visible creation - by exercise of reason, discover God.

65- Natural philosophy is true theology, for it is direct study of works of God, & an indirect study of God thro his works.

Environmentalism & Democracy - Benjamin Rush.

65-66 - Newtonian vision of a world machine operating in orderly fashion — appealed to 18th century mind.

66 Medical Education was his concern.

66-67 - The schools of rationalism & empiricism he found as barriers to progress in medical science.

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69- Like Colden he held matter was eternal.

72- Science, politics & religion → not separate compartments of thought — for enlightenment movement.

3. Philosophical orthodoxy.

Reaction against Enlightenment:-

81- Before this time philosophy had been a search for wisdom, not a subject matter. It was a method of approach to problems. Not a study of conclusions.

Francis Wayland. Teacher of philosophy:-

83 Abandoned medical studies & entered theological seminary.

98. 2 laborious methods for acquisition of knowledge

1. demonstration or deduction - its dominion is absolute, science of quantity or Mathematics.

2. Induction c begins c individual instances, & works its way to laws of a more & more general character. This proceeds from known effects to a discovery of their antecedents. Its method of all non-mathematical sciences.

Laurence P. Hickok – The orthodoxy of Reason :–

92. Cantian ideas came into American thought indirectly & in modified form through / study of philosophic works of Coleridge.

93. Hickok wrote on psychology, philosophic anthropology, ethics, aesthetics, Cosmology, theology & logic. Divided human knowledge into 2 broad areas – Empirical & / Rational.

Empirical → validity tested on experience.
Rational → on reason.

94. Empirical → Realm of physical science; psychical science, – Psychical science is natural science –

95 Rational area → Rational science & aesthetic science.

Rational science – 3 branches – Esthetics Cosmology, ethics – Beauty, truth & Right – ultimately they are one.

97. Empirical psychology – study of thinking & knowing mind & its powers – must be / basis for / study of philosophy or science.

How do we know // there is a mind? from / fact // there is an agent c

makes & records scientific experiments. Experiment differs from experience in being a conscious retrial, carefully performed, & accurately recorded. / conscious care & accuracy of / scientific experiment is evidence for / existence of a mental agent, / mind.

99. Our mental states, however, / content of natural science – hence called psychical science by Hickok – are not objective but subjective – they are in us & not in/ external world. / objects of science are mental images. We cannot prove / objective validity of science & out going beyond science.

102. Empirical psychology is / science of sciences, because it expounds / principles c must be true about intelligence itself. It is like pure mathematics & pure physics, a demonstrative science, completely transcending experience, c is only 'facts c appear to be' & sustaining itself among 'those necessary sources from c all possible experience must originate.'

The psychologizing of philosophy – Noah Porter :–

104. For Porter psychology could not possibly be a rational, deductive science, because this

type of science must proceed from 1st principles to conclusions. First principles are the subject matter of metaphysics, & it has already been shown that for Porter there could be no sound metaphysics prior to psychology. Psychology must precede metaphysics, & cannot depend upon it. It must be an inductive science, building up generalised conclusions out of particular observations.

The observations on which psychological generalisations are formed are introspective. The only method for the study of psychology in Porter's approach required that we watch our own minds at work.

106. Mental states must be states of some psyche. A mental state which is not produced or felt by an individual self, is as inconceivable as a Δ with out 3 ∠s, or a □ with out 4 sides. In the very moment of being conscious of our changing mental states, we are directly & immediately conscious of our selves as the permanent & the unchanging ground to which the mental state belongs.

106-107. Kant was therefore in error, when he asserted that we cannot know "things-in-themselves" things as they really are apart from our knowledge of them. There is at least one 'thing-in-itself' that we can know immediately. The thinking agent is known to itself as a permanent reality.

107. There is other intuitive knowledge, in Porter's view, besides man's knowledge of his own body, but it is not knowledge of objects of perception. Certain fundamental laws & necessary truths which are presupposed by inductive thinking cannot themselves be derived inductively. They must therefore be known by intuition.

108. He argued that axioms of mathematics & basic laws of thought were intuitively known before experience & that these axioms & laws are necessarily true, their negation being inconceivable to the human mind. We need as a basis of our own thinking, an intuitive knowledge that particular events & processes are not merely random, haphazard affairs, but rather reveal an internal design, arrangement & purpose, & also that all the things, events & processes in the universe have their place in an all-inclusive, overarching, universal purposive pattern, pervading all existence. Purposiveness & design are indispensable as the ground of the scientific explanation of the facts & phenomena in the universe.

Porter approached philosophy by way ^ psychology. Paid particular attention to structure ^ language, because he believed

// this structure represents / pattern in which / mind receives its impressions of outside world, he believed // / human mind is altogether active in perception & in knowledge; he thought // there were certain ideas // were apprehended intuitively by / mind, after which / method ^ reasoning was inductive.

It is impossible for / finite human mind completely to know / infinite, / absolute, / unconditioned. Yet, because knowledge doesn't have to be complete, Potter maintained // / finite mind ^ man could know God.

109. The Absolute is a thinking agent. Universe is a thought as well as a thing. / design ^ universe reveals thought as well as force.

4. New England's Wild Oats.

Transcendentalism:

111. Transcendalist intuition was // in effect / supernatural sense ^ Jonathan Edwards. But for Edwards it came only to / elect.

Transcendentalists held / more democratic view // intuition, / ability to know / divine reality directly is / birth right ^ every human being.

113. Among transcendentalists — faith was founded on / doctrine ^ self-reliance — / doctrine // an individual who steadfastly & honestly explores his inmost thoughts would find in them truths ^ universal import.

Transcendentalism does not reproduce exactly / tenets ^ / Enlightenment. But in some ways there is a unity ^ love in / 2 movements.

114. Transcendentalists left their churches, feeling // only by doing so could they become free spirits. Thoreau "It is necessary not to be a christian to appreciate / beauty & significance ^ / life ^ christ".

When a man grows in God-likeness, he develops a power ^ vision which enables him to see / divine in everything, from / frail flower to / everlasting stars.

115. Work ^ Coleridge brought philosophy & theology together again after years ^ / enlightenment during which philosophy & reason were conceived to be at war with religion

Ralph Waldo Emerson – Individualist :

124: Emerson:– "Standing on / bare ground, my head bathed by / blithe air, & uplifted into infinite space – all mean egotism vanishes. I become a transparent eye-ball. I am nothing I see all. / currents of universal being circulate thro' me."

125. / nature – / order ^ things – on e Emerson counted is not // ^ / scientist, but rather // ^ / nature – mystic. / Kingdom ^ man over nature, is not / product ^ / precise observation ^ / man ^ science. It is rather, / dominion ^ / poet or artist who is / master ^ nature because he can take its separate forms, its trees & flowers & clouds, & integrate them into one landscape. It is too / power ^ / mystic to use nature as / focus ^ spirit, to develop / ability to become so completely absorbed in nature // he loses his sense of separateness & is aware only ^ his abiding kinship ē all creation. Only to / man who goes out to meet nature in / mood ^ / nature-lover does nature reveal her secrets. / unchanging & objective face ^ nature e is / concern ^ / scientist did not interest Emerson.

126. There are 3 stages to Emerson's account ^ / relation between nature & language. In / 1st ^ these stages, we come to appreciate / fact // all words are signs ^ natural facts. This is obviously true not only ^ / words we use to describe / natural facts themselves, but also ^ / abstract words in e we express moral or intellectual facts. Our more / abstract words are rooted in / concrete words e describe nature. Language e is abstract is / metaphoric use ^ concrete language. The use ^ natural history is to give us aid in supernatural history.

128. Nature disciplines / understanding in intellectual truths. Thus space & time teach / importance ^ differentiation & gradation, & // men are individual. / mind is disciplined to recognize / unity ^ nature despite its variety ^ content. Each thing in / universe is a reflection in miniature ^ / universe itself. / basic law underlying all creation is one & / same throughout. Under / promptings ^ nature, in / 4 classes of – commodity, beauty, language & discipline, we have made a beginning ^ culture. / very first effect ^ this culture is to make us aware ^ a duality ^ observer & spectacle, man & nature, mind & matter.

129. This is / dualism on e poets base their

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of idealism. To / man of common sense, thoughts must conform to things, mind to matter. / observer is limited by / spectacle. / poet makes things conform to his thoughts about them. Matter seems to him to be flexible under / imprint of mind. / spectacle is ordered and created by / observer. It is / play of imagination which enables / poet to convert / objects of sense into / words of reason. Imagination may be defined as / use which / Reason makes of / material world. / purpose of / poet's activity is / pursuit of beauty. / philosopher's end is truth. Otherwise they are at one. For both of them / 'empire of thought' precedes & determines / apparent order & relations of things! Both are able to dissolve apparently solid matter by their thought, thus imparting a spiritual life to all of nature. They are able to grasp by intuition / inner law which permeates nature. Philosophy invariably produces a doubt // matter really exists by concentrating attention on ideas. Religion & ethics supplement philosophy by suggesting // matter is inferior to / spirit.

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Henry David Thoreau: The Anarchist:

134. His reflections on / relation of / individual to civil government finally led him to the writing of / 'Essay on civil disobedience', which is to this day regarded as a classic in / literature of nonviolence. It was for eg. one of / works by which Mahatma Gandhi was deeply influenced.

135. Better government essentially meant to him govt in which Rt & wrong are determined by / conscience of / citizens, not by majorities.

137. A state which treated / individual with respect would be worthy of / respect of / individual.

138. A free soul, one who is truly independent, has no wants which / state can satisfy. He can describe his life as both more civil & more free than any civil society.

138–139 / legislators in / nation's capital are slaves. They / sell themselves for position & office. Why wait until one gp of slaves orders / liberation of another? Rather follow / path of George Brown & assert // freedom direct by your own action.

Wait not till slaves pronounce / word

To set / captive free
Be free yourselves, be not deferred,
And farewell slavery.

139. / mind which is truly free is beyond its own involvement with nature. It is spectator not merely ^ all time & all existence in general, but ^ / particular time & particular existence which it shares with a body. / detachment ^ mind which is / ultimate independence is like / Hindu & Buddhist concept ^ 'Nirvana', a release from physical concern. Thoreau, however, was in / western tradition, & thought ^ his release from involvement as / result ^ 'a conscious effort ^ / mind' in thinking. It is possible to become as much / spectator ^ one's own experience as if one were witnessing a theatrical exhibition, to be as far from one's own experiences as from that ^ another person.

140. Although we have seen evidence in Thoreau's ideas ^ a deeply spiritual & religious nature, & although there is a christ-like quality to his life, & his thought, none ^ / transcendentalists went farther than Thoreau in opposition to

organised christianity. His christianity was a pure appreciation ^ / beauty ^ / life ^ christ. It was anticlerical & / antiecclesiastical.

141. / christianity ^ / churches seemed to Thoreau to be without value for / healthy. '/ church is a sort ^ hospital for / men's souls, & as full ^ quackery as / hospital for their bodies.'

Henry James - The Elder - Social democrat:—

143. / usual problem ^ Religious philosophers:— proving / existence ^ God from an accepted & admitted creation. / world is here & now. Our problem is to learn about its Maker by / study ^ its nature. James's transcendental mind inverted / problem. It was / creator whose reality / James never doubted. What he sought to find was / creation.

143-144: Emerson appreciated Swedenborg's insight but he felt / Swedenborg lacked a proper appreciation ^ / place ^ / individual in / cosmic scheme. It was precisely this aspect ^ Swedenborg's thought which was most appealing to James. / primary premise ^ James'

philosophy is // / individual is, in himself, nothing. All // / individual seems to be he owes to / nature he inherits from / human race & to / culture ^ / particular society into e he chances to be born. //

There is a lack ^ true selfhood, true individuality, in / human creatures is an imp. factor in / James' thought because this lack is an aspect ^ / problem ^ creation e defies further analysis.

146. James asserts // / life ^ a man is composed ^ 3 realms. (1) Exterior – physical – / realm ^ body. 2) interior – psychical – realm ^ mind or soul 3) Inmost – spiritual – realm ^ spirit.

In / 1st :– organisation ^ life based upon sensation. Sun is / light by e / life ^ sense is supported & strengthened. / light of sun is essential to / health ^ body.

mind :– life organised scientifically. Light is Reason – necessary for mental health.

3rd :– organised philosophically. Light is revelation. essential to spiritual health.

"The sun in / realm ^ body corresponds to

reason in / realm ^ mind, but / sun casts no light in reason's domain, any more than reason does in // ^ sun.

147. Through senses by / light ^ sun, man becomes acquainted e finite existence, in / realm ^ body. Science leads to knowledge ^ relative existence, & / purer & finer light ^ reason must replace // ^ sense. Philosophy leads us to an acquaintance e / infinite & absolute existence. To this end it requires a light more subtle than / light ^ nature, more penetrating & steadier than that ^ reason – / serene & steadfast ray ^ Revelation.

148. Not revelation itself, but what we see by / light ^ revelation, should be our concern.

/ organising principle ^ society thus conceived is / pure, altruistic love ^ man for man. This is, of course, / principle ^ ideal or regenerate society.

5 The Biologizing of philosophy.

154. 'Kosmos' by Friedrich Alexander Von Humboldt. (1769 – 1859) – published

between 1845 & 1858. Astronomy, meteorology, geology, botany, biology, zoology & anthropology — all / sciences ^ / time were brought together into a systematic portrait ^ / cosmic order by a scientist ^ varied attainments who had won / respect ^ all Europe by his specialized studies.

Cosmic philosophy: John Fiske:-

161:-

161. Spencer :" Synthetic philosophy"- Fiske "Cosmic" better term. 3 arguments to defend / term.

① Cosmos means not only / totality ^ phenomena but also their order, pattern & regularity. no theological system c̄ admits ^ miracles, supernatural interpositions, or special creation can be cosmic, because it permits / violation ^ order. 2) no ontological or metaphysical system can be cosmic

because it discusses ideal entities c̄ are not ^ / cosmos or phenomenal universe. ③ No positivist philosophy can be cosmic, because all such systems deny / possibility ^ a unified account ^ /

universe.

162. Spencer was a liberal social reformer, c̄ in / meaning ^ / word 'liberal' in / 19th century & had studied / natural sciences. he was not expert in any one science, but familiar c̄ all, & his interest in them was comparative. He attempted to apply / methods ^ natural sciences, & even on some occasions, their results, to / formulation ^ social sciences as a program ^ social reform. Fiske, had very little knowledge ^ / natural sciences & very little concern for them, & was not interested in social reform. He was most ardently devoted to / study ^ history & to humanistic literature, & indeed, he achieved his chief fame as historian. Despite his recognition ^ / need for a scientific structure in / social studies, he never really achieved / view ^ social science as a natural science c̄ is so characteristic ^ Spencer.

164. "The very hostility between science & Religion, is purely a chimera ^ / imagination."

165. "Scientific inquiry leads man to worship / God he finds everywhere in evidence in / natural order. Each act ^ scientific explanation but reveals an opening in c̄

Shines / glory ^ / Eternal Majesty!"

6. Varieties ^ idealism:

Absolute Idealism. Josiah Royce:-

207. Immanuel Kant had distinguished 4 fundamental philosophic problems.
1. What do I know?
2. What ought I to do?
3. What may I hope?
4. What is man?

Chap 9. The Emergence ^ Naturalism.

The naturalist temper:-

313. Philosophy since / time ^ Descartes, so called 'modern philosophy', has characteristically been concerned especially ē problems ^ knowledge. Most ^ these have arisen because a separation or division ^ same sort has been conceived to exist between / knower & / known.

315. Traditional philosophy was not satisfied ē a human being who performed certain actions & behaved in certain ways - sometimes reflectively, sometimes emotionally, sometimes physically. It broke / whole human being to pieces & assumed // these pieces acted

separately, each after its own fashion. Then each piece was given a name, - mind, feeling, body - & assumed to be an entity ē a life ^ its own. Finally it was so far forgotten that there was a whole man // / relation between one piece & another came to be / problem. If we reverse this process & recall to one thought // mind is a name for / whole human being acting reflectively, // feelings are a name for / whole human being acting emotionally, // body is a name for / whole human being acting physically // in short, there are not now & never were entities corresponding to / substantive words // we use, there is no longer a mind-body dualism.

320-21:- Among / more materialistic ^ / schools, / categories ^ interpretation still tend to be those ^ matter, motion & energy, & / explanations ē are given in these terms exclude from existence or from consideration / highest & / most cherished ^ human values. Many ^ / naturalists like William R. Dennis of / Univ ^ California, on / other hand, find / significant interpretive categories in events, qualities, & relations. One way in ē this

difference has been explained is as / outgrowth
of / differing emphases ^ those among / naturalists
whose interests & background include

special concern for / 'structural' sciences like
physics & mathematics, & those whose scientific
background is / 'functional' sciences, like
biology or / social sciences.

322. 3 diff. forms ^ philosophic naturalism

① Reluctant & poetic naturalism ^ George Santayana. Who loved / realm ^ spirit though he recognised / realm ^ nature

② Rationalistic naturalism – Morris Raphael Cohen.

③ Experimental naturalism – John Dewey.

Poetic Naturalism (George Santayana)

323. always concerned to / man's highest ideals ^ / good, / true & / beautiful. He felt compelled to / base his views ^ / good, / true & / beautiful on a naturalistic account ^ being and a realistic account ^ knowing.

324. Philosophy is by no means either a science among other sciences, or an art

among other arts. It is / attempt ^ a
balanced mind to utilize all / sciences &
all / arts in / composition ^ as true a

picture as possible of nature & human
nature."

Santayana was a detached spectator. He was intellectually repelled by / intellectual world in c̄ he lived. He called it a 'zoological garden of mind'. In this zoological garden he preferred to be a visitor outside / cages looking in, not one ^ / specimens inside / cages looking out. This was in part why he preferred reading / books of his contemporaries to meeting c̄ them.

325. We frequently confuse our speech, he said, by using / same word for things as they really are and things as they seem to humans to be. / Word 'madness' at least 3 ways in c̄ it can be used. 1) mental illusions – ② certain types ^ behaviour 3) to express an unwarranted & overcensorious comment on / behaviour or / mentality ^ someone c̄ whom we disagree or ^ whom we do not approve.

In any ^ these cases, / judgment c̄

we make or behaviours, or delusion
is // it is out of / usual & conventional
patterns of our / society. We fail to
make / proper distinction between what

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is natural & what is merely conventional.
∴ we call 'madness' an unnatural
thing, though it is really nothing more
than unconventional.

326. Human values may be developed in / scientific study of nature. They may be / developed in a poetic appreciation of nature. Nature does not care whether men seek for truth or for beauty. Both can feed on nature & it is not concerned with their feeding or with their failure to find sustenance. Since Santayana believes // either method can reach its goal, and since / method he prefers is / poetic, it is this // he has used, especially in his later writings.

326. Ideas, ideals & beliefs are

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as much facts of nature as stones, stars and seasons.

327-28 - / life of / prehuman animal is based upon unconscious impulse - it is not rational. A life of reverie, fantasy, vision

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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	✿

& dream, though it represents an intense consciousness, is not rational or human. 'Reason & humanity begin

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with / union of instinct and ideation."
Instinct becomes aware of its goals, becomes self conscious, & consciousness becomes concerned with its roots. Reason is not merely speculative. It is also 'efficacious reflection." The life of reason, then, is not only reflection on progress. It is itself / embodiment of progress.

328 - 4 institutions in which / rational life is expressed - Society, religion, art & science. They develop thru 3 stages.

① Prerational stage - controlling factors in life - impulse, habit, desire.

② Rational: - Ideals supported by natural impulses are recognised, clarified & consciously adapted to / control of life.

③ Post rational: - / form in which imagination clothes a rational & human reason.

329. Prerational morality has a great deal of practical & emotional power, & may be said to be / morality proper. It is essentially part of anthropology rather than of science or philosophy.

MAY	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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Post rational morality is developed by men who are for one or another reason dissatisfied ē / life ^ reason ē they have tried — post rational systems, he asserts, "are essentially religious".

When a supernaturalistic vocabulary & supernaturalistic forms become / poetic garments ^ experience & reason, & when they are but a symbolism to bring man back to nature, then postrational morality has a real value in / life ^ reason.

329 - 330. Historically religion has made / attempt to explain natural causes by / means ^ superstitious mythologies & to substitute / magical procedures for technologies - - - . Rational religion still utilises / mythologies ē primitive religions take as literal accounts ^ / origin & destiny ^ man & / universe, but it utilises them as poetic renderings ^ / moral ideals ^ piety toward / sources ^ our being & spirituality toward our ideal ends, rooted as they are in nature - Thus Santayana was able to make / idea ^ God as a symbol for human [illegible]. ideals.

330 Science and religion are diff- aspects ^ man's relation to / reality world ^ nature ē surrounds him. Science is / expression of dynamic relations ^ man & nature.

/ function ^ religion is to 'express destiny in moral dimensions, in obviously mythical & poetical images... Religions are / great fairy tales ^ / conscience.

330. By insisting on / reality ^ supernature Santayana intended to distinguish it from a purely conceptual realm like mathematics.

331. Supernaturalism would [illegible] be a completed naturalism. It would not be a dualism in ē supernature & nature are opposed, as the appear reality & appearance, but a dynamic continuity ^ nature & supernature, taking account ^ facts & forces ē are 'hidden from our near-sighted & imperfect science'. Dynamic continuity :— means nature conceived in fullness & richness is supernature. (unlimited by / attempt to deal solely ē matter, motion & energy)

" This almost tangible supernatural world is only / rest of nature, nature in her true depths is in her true Infinity.

833-834. " Naturalism --- is something to which I am so thoroughly wedded that I like to call it materialism, so as to prevent all confusion from romantic naturalism like Goethe's, for instance, or that of Bergson. Mine is / hard, non-humanistic naturalism of / ionian philosophers, of Democritus, Lucretius, & Spinoza --- My naturalism is fundamental & includes man, his mind & all his works, products of / generative order of nature."

The Mind of Adisankaracharya.
Y. Keshava menon. Jaico Publishing house - 3rd impression 1989.

General back ground:
Videre - Latin - to see.
Voir (French) = Vision (English)
Veda = to see, to know.

Sources of knowledge. frankly dependent on "intuition" as a source of knowledge - (secondly on reason)

Reason - limited - It cannot establish truth. It can only establish relations & examine / veracity of propositions. but every proposition is itself established by reasoning from some other proposition or propositions. These in turn must have been derived by reasoning from others. Thus we are faced with 2 alternatives. 1.) to pursue an infinite regress, in which / end is more or less bound to lead to reasoning in a circle. 2) to admit openly that some propositions are in / nature of axioms which cannot be established by reasoning & which, if valid, must owe their veracity to some other source.

(11) The propositions of pure mathematics are usually regarded as being a priori knowledge. eg. 2+2 = 4. - as a part of / basic content of / mind & of / universe.
2 sheep + 2 sheep = 4 sheep.
/ more complex relationships between things, such as / motions in / earth

the/ seen, are clearly not part of mind's furniture. Equally clearly they cannot always be directly observed.

APR 12 SAT

Empiricism therefore is not enough. But Shankara is not antirational. Reason as applied to the facts & experiment is to him an indispensable means in the search after reality. But reason has to be employed only as the tool of intuition, as a critical weapon for testing ~~Vass~~ assumptions.

18. If symbolic worship is a sin, then so is childhood when we are found to learn at 1st by over-simplified pictures.

15. Philosophy for Shankara is not intended for satisfying intellectual curiosity or to serve as a training in dialectic. Nor is a philosopher one who can talk about philosophy

13 SUNDAY

or who knows the scriptures by heart. But one who has learnt by intuitive experience, which is possible only when philosophy is lived.

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3 parts of Student's training:-
① Study of Upanishads at the feet of a spiritually qualified teacher

APR 14 MON

② Reasoning ō in oneself.
③ Meditation.

Self:-

The world is in my mind. My mind is in the world. How to solve this puzzle?

'I' - 4 different meanings for Shankara.
① Inner consciousness or knower.
② Antah karana - (inner organ)
③ Ego.
④ Jiva (soul)

First Principles. Spencer. H. 5th Edition. 1887. Williams & Norgate. Edinburgh.

chap. 3. Space & time — ? objective / ? subjective.

objective:- External to & independent of ourselves. Are they entities? Entity has attributes. Space & time have no attributes. ∴ not entities.

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Subjective :— internal & appertain to one own consciousness. Are they non-entities? nonentity is nonexistent. ∴ they are not non-entities.

APR 15 TUE

To be conceived, a thing must be conceived as having attributes.
Attributes ʌ space :— Extension, or occupying space. Space is extended means space occupy space.
All entities known are limited. no limitation to time & space. Impossible to think of an unbounded space, totally unable to imagine bounds beyond which there is no space.
Kant :— space & time are forms ʌ intellect. "a priori laws or conditions of / conscious mind". That is, they are subjective.
A boat travelling to west — / captain at / same speed walks to / east — but with respect to surrounding space he is stationary. Earth's motion :— He is travelling at a rate of 1000 miles / hr to / ~~east~~ east. Earth's motion in its orbit :— 68000 miles per hr to / west. ∴ He is moving / 67000 miles / hr to / west, and not to / east.

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solar system to / constellation of Hercules :— neither east nor west but in a line inclined to the plane ʌ / ecliptic.

APR 16 WED

Motion is change ʌ place. In unlimited space change of place is unconceivable and place itself is unconceivable. All places are equidistant from boundaries // do not exist.
[∴ [illegible]].

Science & Religion. An interpretation ʌ 2 communities. by Harold K. Schilling. George Allen & Unwin [illegible]. London. 1963 edition.
Page 4. A renowned Scottish theologian, / late John Baillie, noted this fact in a series ʌ lectures on 'Why I am a Christian'. In his introduction, he referred to / well known essay by Bertrand Russell on 'Why I am not a Christian', & remarked // if to be a Christian meant what Lord Russell seemed to think it meant, he, John Baillie, would not want to be a Christian either.
7. Each is unique & each has something unique to offer. Each is enriched by / other.
9. Faith is not a 'believing //', but a 'believing in', a trusting, self-committing state —

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1 being, an orientation 1 life & thought.
11. Science & Religion are circular in // essentially they are nonlogical in character.

15. Science is often spoken 1 as a potent force or influence for / good in / world — & quite properly so. Look at what it has done technologically ..... what it has done spiritually, in fighting against superstition & ignorance, & for freedom 1 inquiry, critical thinking, & for / sceptical approach in / attack upon problems! Moreover, Science is an actual social enterprise, an undertaking an historical movement.
22. Science centers its attention upon // e in symbol used by / word, 'nature', while religion focuses upon // symbols used by / term God.
33. 2 erroneous stereotypes — 'The scientific method' & 'Divine revelation'.
34. 2 stages in / gaining 1 scientific knowledge — the pioneering stage & / colonising stage.
36. Experiments set up in / lab are not experiments at all, but rather only lab-exercises designed to provide fully expected empirical verifications — in foolproof manner & by / shortest possible logical route — 1 principles

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and laws // are already wellknown. / doing 1 these exercises rarely gives any hint 1 / painful intellectual travail & / long & often dispiriting wanderings about in / wilderness 1 repeated failures // may have preceded / final successful break through into / promised land 1 new knowledge.
Prof. P.W. Bridgman (Harvard Uty.): —
" The Scientific method, as far as it is a method, is nothing more than doing one's damnedest with one's mind, no holds barred. What primarily distinguishes Science from other intellectual enterprises is e / right answer has to be obtained is not method but / subject matter."
39. Science does not constitute a paradigm or model 1 formal logical thinking, in / sense // at every step 1 / way its thoughts is controlled by / canons 1 inductive & deductive logic. / Physics is commonly regarded as / most highly developed 1 / sciences from / viewpoint 1 logic. And yet it is well known // mathematicians, many 1 whom are logicians professionally, are prone to shake their heads in wonderment & despair at / atrocious logic 1 physicists in general.
40. Scientific thinking is creative, imaginative reasoning.

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41. Scientific method is said to have 4 components namely, observation, inductive generalisation, deductive prediction and exptal verification.

APR 19 SAT

42. Quotation from Phillipp. Frank "– the main activity ʌ science consists w/ invention ʌ symbols from c̄ our experience can be logically derived. This system is / work ʌ / creative imagination c̄ tests on / basis ʌ our experience. / work ʌ / scientist is probably not fundamentally different from / work ʌ the poet."

/ Science's most potent sources ʌ strength namely // ʌ human imagination & intuition wherein it is remarkably akin to / humanities & religion. There can be little doubt / most ʌ / truly great & revolutionary ideas ʌ science came into being intuitively during pds ʌ revelatory insight, rather than by syllogistic or inductive logic.

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50. Science is not only a human, but more particularly a social enterprise // is one ʌ sharing, co-operation & ʌ interaction ʌ people.

APR 21 MON

51. Instrumentation, & solitary intelligence do not ʌ themselves guarantee accuracy. objectivity cannot be achieved by a solitary individual, but only socially, ie, when / observation & expts ʌ one scientist have been validated reciprocally thru repetition by others. A / synonym ʌ objectivity is inter subjective testability.

58. Science has not been communal for more than approximately 200 yrs.

59. / idea ʌ a community has not played an imp. role in / thought ʌ science until recently. In religion / idea ʌ a community has been in / forefront for a long time – It is at once personal & communal. – It depends / sanctity ʌ / individual – The personal destiny is / being bound up indissolubly c̄ // ʌ / people.

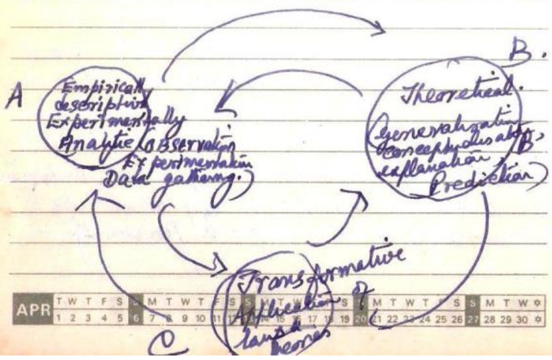
61. It is not true // religion is subjective, whereas science is objective. Both want objectivity. Neither achieves it perfectly. Insofar as they do achieve it, it is [illegible] intersubjective testability ie both insist // before / experiences or findings ʌ an individual are accepted as valid they must be communicable & make sense to / community.

62. In neither science nor / church is objectivity possible for / solitary individual. It is achievable only in community.

66. History seems to reveal a sort 1 natural law // communities must in time become organised & institutionalised, or they disintegrate. This seems to be so even though paradoxically / process 1 institutionalization itself contains / / seed 1 disintegration.

68. Albert Einstein is credited ē having said // if one wants to know what science is one should not listen to what scientists say about it, but go & watch them at work. Apparently this can be said about theologians also.

69. Science is threefold & circular. Religion also.



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74. Physics & astronomy are alike in their strong emphasis upon mathematical theory. & in their quest for / grand, all inclusive theory. But for astronomy circle A represents almost exclusively only observation & measurement ē virtually no experimentation. After all, astronomers cannot experiment ē / planets or stars, & intervene in their courses to manipulate them under control conditions. Nor is astronomy outstandingly transformative. Useful applications are very few indeed, & they are confined mostly to / determining time & place (latitude & longitude). - - - - -

Thus it is not the // experimentation is what characterises all sciences. Nor do all 1 them think predominantly in quantitative terms.

77. Theology is related to experience as physics is related / to light & electricity. If this were true experience itself would be / source 1 religion & theology a branch 1 psychology or anthropology.

Experience is / gate-way to or / transmitting mediator 1 / reality experienced. / physicist experience light & electricity. What he attempts to do is conceptualise & correlate / data 1 // experience in order to achieve knowledge or

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understanding ^ light and electricity.
What should then be said is // experience plays / same role in religion as it does

APR 24 THU

in physics. This means // theology is related to experience as theoretical physics is related to experience. Theological theories are to / data ^ / religious experience ^ God & man, as physical theories are to / data ^ experience ^ light & electricity. / From this standpoint, religion / including theology, is no more a branch ^ psychology & anthropology than is physics, including theoretical physics.

84. By circularity ^ thought I mean a relationship between ideas // are so utterly interdependent // each presupposes / others / & yet none is / necessary logical foundation ^ / others. By circularity ^ experience I mean a ||r relationship between components ^ experience.

There is circularity also c̄ respect to / interaction ^ experience & thought, & ∴ to / entire enterprise ^ science, involving all 3 circles. Together, / latter constitute / scientific circle. This means // science is an indissoluble tri-unity, each of / 3 components

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depending upon / others, & none being / logical prerequisite ^ / others.

85. One can enter / circle anywhere & then proceed around it in either direction as

APR 25 FRI

suggested by / opposite arrow. Thus some scientists have in fact been drawn to / circle by fascination ^ certain phenomena (A), others by an elegant theory (B), & still others by a useful technological problem (C).
[Compare — [illegible], mimno, [illegible]]

Likewise in religion. Some enter / circle thro' / gate ^ belief, others by experience & still others by social action. There are also other modes or points ^ entry. None is logically prior to / others. Once in / circle, a person may then proceed around it in either direction as his insights & experience grow.

86. Science & religion are nonlogically circular in experience & thought; in this respect they are remarkably ||r, so much so // if we understand & appreciate / nature ^ / one, it will help us to understand / other. Where they differ is in / kind & content ^ / experiences they represent, in / kind & object ^ their speculations &

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APR 26 SAT

theories & in / kind ^ practical transform-ative action they undertake in / world?

88. Science & Religion are in actuality intensely personal & communal.

100-101 - / There are many spiral nebulae hundreds ^ millions ^ light yrs away. Probably all astronomers would call this a / factual statement. And yet it is far from being a bare fact. Basic to it is / assumption ^ / finite speed ^ light, as well as others, e.g. // this speed is / same everywhere in stellar space, & is / same now as millions ^ yrs ago. I am, of course, not calling these assumptions into question. But I am saying that they are there as presuppositions in / thinking ^ / astronomer, though he seems rarely to point them out. Factual statements of astronomy are then laden c̄ presuppositions. / Some ^ them come out ^ earlier empirical findings, others from particular theories & still others from basic ways ^ conceiving / universe — such as, // its fundamental

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physical properties & laws are uniform throughout all space & unchangeable in time.

104. Ludwig Fleck (Microbiologist) suggests, however, // it came about not so much because

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APR 28 MON

there was deliberate collaboration, or even a convergence of findings by independent workers, as because / thinking ^ many individuals was determined to a great extent by / common style ^ thought (Denkstil) and / compelling thought pressure (Denkzwang) ^ / scientific community, c̄ he very appropriately & ingeniously thinks ^ as a thought collective (Denkkollektiv), or fellowship ^ thought (Denkgemeinschaft) and mood (Stimmungskameradschaft). He urges // this fact is typical ^ / facts ^ science, as distinguished from / more obvious ones ^ everyday life, in regard to both their nature & evolution. He criticizes c̄ keen insights, & refreshing humor, / traditional accounts ^ how such facts are won. To quote him in somewhat free translation, he says:- "There exists a widely propagated myth about observation & experiment. The understanding subject (as distinguished from / object to be understood) is portrayed as a sort ^ conqueror who like Julius Caesar wins his battles according to / methodological formula — Veni, Vidi, Vici. According to this view, if one wishes to know something, one simply makes an observation or an expt — and behold, one knows it.

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Even accomplished investigators who have won many a battle believe this naive fairy tale, when they consider their work in retrospect.")

APR 29 TUE

105. He then cites much evidence to show // such naive views of science are no longer tenable. And this is supported by an rising no. of anecdotal, biographical, historical & sociological studies of science as well as by psychol. studies of perception & of other aspects of winning knowledge.

Epistemology must then, Fleck suggests, take into account more than simply / subject & object, namely / community. Fleck suggests / epistemological model, if it is to be adequate for explaining / generation of knowledge, must be not merely / traditional duality of subject - object, but / trinity of subject - object - community.

106 - / term 'truth' is not a scientific one; // is to say, it does not belong to / technical vocabulary of science. Nor is there, so far as I am aware, a scientific, as distinguished from a philosophic, doctrine of truth.

108. As Poincare said long ago, a theory is like a tool of thought or a language, & it makes no sense to speak of German or French as true or false.

APR 30 WED

Among many members of physicists a theory is regarded rather as more or less useful or fruitful or fertile, than as true or false.

131. The term 'scientific revelation' is intended to convey a distinctive meaning dif- from // of "divine revelation".

131 - 132. What is common to them is / element of unplanned, uncontrived disclosure, a coming to see, an uncovering of what was not known, a vision of overarching perspective, a sudden bursting forth or a more gradual flowering of insight. What is not common to them is / kind of insight they lead to, & / source of disclosure. In / one case man has himself attained insight about nature; in / other God has disclosed Himself to man.

142. Prof. F.S.C. Northrop of Yale, who has suggested // there are 2 kinds, or components, of concepts, namely concepts-by-intuition, & concepts-by-postulation. / former refers to what is 'seen directly' or 'immediately apprehended' in observation by what he calls 'aesthetic intuition'. / latter to what is cogitated

theoretically, i.e., constructed or postulated. .... In scientific thought some important concepts have 3 rather than 2 components, especially those referring to unseen entities, not directly observable, yet thought of as existing in nature, & as having 'behaviour' which may be investigated. Such concepts seem to have 3 significantly different components or meanings which I shall designate meaning-by-experience, meaning-by-postulation (in Northrop's sense), and meaning-by-presupposition or by-intuition.

143 – In A, there are exhibited the products of conscious, deliberate observations & reasoned empirical analysis (experimentation), in C the product of deliberate mental construction & postulation, in B we display the product of a more immediate awareness, perhaps what Northrop has called "aesthetic intuition."

144 Three meanings represented by the symbol light: The 1st, 'light A' refers to the many-sided human experience of lightness, as well as to the accumulation of scientific empirical knowledge. It is the component of the meaning of the concept light that comes out of reasoned critical empirical analysis of optical experience – out of scientific observation & experimentation. It illustrates what is meant by a concept-by-experience, or concept-by-empirical analysis.

A	B	C
a. Experimental meaning	Intuited meaning	theoretical meaning
b. Concept by experience, by empirical analysis.	by intuition, by presupposition	Concept by postulation
Experience of lightness, darkness; seeing; experience extended instrumentally.	Intuitive nonconceptual apprehension, or sensitivity to an entity, stuff, or influence called light – inherited – pre-suppositional.	Imaginative 'explanations' or theoretical symbols of experience of lightness, postulations of the nature & behaviour of the entity light.
I Common experience: day, night, sun, moon, stars, luminous & illuminated bodies, seeing at a distance, with mirrors, lenses, prisms, coloured bodies, warmth, radiation.		I Common explanatory schemes: – Something above firmament, radiation from eye, from luminous bodies, interaction of 2 radiation.
II. Scientific experience Reflection, Refraction, dispersion, diffraction, Polarization, time lag velocity, 'invisible light' like U.V. light, infrared, Electromagnetic – radio, radar, cosmic radiation – X ray, γ ray.		II Scientific theories: symbolic structures: corpuscular, undulatory (wave), elastic solid (ether), electromagnetic (ether), neo corpuscular (photons), wave particles, purely mathematico-symbolic, predictive models.

light B connotes / entity 'light' or // 'something" // enables us to see, to ē our eyes & instruments respond, but ē cannot itself be 'seen'. Since it is thus directly apprehended ē out / reasoned analysis involved in light 'A'; / evidence ∧ light B is taken for granted universally – intuitively. Even in beginning Physics Courses its existence is simply assumed, often ē out explicit mention or definition. This is an example ∧ a concept-by-presupposition or-by-intuition. It may not be incorrect to remark also // it borders on, or points toward, / nonconceptual fact ∧ knowledge.

146. Light 'C' signifies / theoretical component ∧ / physicists' concept ∧ light, his attempt to explain imaginatively how / entity light B behaves in order to be experienced as light A. It stands for / particular theoretical model ∧ light // is current at a given stage ∧ / history ∧ optics. It is postulated, deliberately mentally constructed light, ē properties defined by a system ∧ equations, from ē can be deduced

functional relationships // will correspond hopefully to / empirically obtained equations or laws, // define a concept-by-experience. Here, then, we have a concept-by-postulation.

151. / belief in / existence ∧ light & our knowle-

-dge ∧ it have then a 3fold basis or aspect. 1st (meaning B) direct, intuitive, unreasoned apprehension & cultural acceptance; 2nd (meaning A) reasoned analysis ∧ / manifold optical experiences ∧ light & deliberate experimentation ē optical phenomena; & 3rd (meaning C) / success ∧ theoretical activity in / attempt to correlate, explain, apply & predict by means ∧ imaginative mental constructions & hypotheses.

153. Late in / 19th century / celebrated mathematician Poincare, in his analysis ∧ / content ∧ / space concept, used such differentiating terms as geometrical space, representative space, visual space, tactile space, motor space - other terms // have been used are natural space, physical space, stellar space, mathematical space, psychological space & so on. - 3 concepts of God

158-159.

A	B	C.
A: Experiential meaning 1. Concept by experience by analysis of historical experience	Intuited meaning concept by intuition by presupposition.	Theoretical, explanatory by postulation, symbolization or myth
God experienced personally, historically communally.	God as 'being' or influence directly intuited, or apprehended subconsciously, non-conceptually; inherited - presuppositional.	God as consciously imagined, speculatively postulated, mythically symbolised, theoretically explained.

MAY 06 TUE

Common experience of mankind:-
experienced in worship, prayer, ritual, / holy numinous sacred place, & time.
mystic vision.

Sense of sin & righteousness. Grace & providence, order & intelligibility of nature

Judaeo-christian experiences:-

a) historical / communal event.	God.
Abraham's call	as covenanter
Exodus	as deliverer
Sinai	as law giver
Prophets	of social justice
Christ	as incarnate
Crucifixion	as conqueror of sin
Resurrection	conqueror of death
Pentecost	as holy Ghost

b) Personal -
agape, self sacrificing love, love of neighbour
grace, forgiveness, conversion, miracle, common work
suffering

Common explanatory, symbolic, mythical, theoretical concepts, & / or systems:- animism, polytheism, pantheism, monotheism, Deism, personal, impersonal divinity transcendent, immanent absolute, infinite, 1st cause.

Common explanatory symbolic, mythical theoretical concepts & / systems:- Theoretical, interpretative images & concepts of christian tradition:- Creator, father, king Judge. Preexistent son of God Holy spirit, Deus Absconditus (hiding God) Deus Revelatus (revealing God) Deus Soter (saving God) Messiah, christos, omnipotent omnipresent, omniscient, incomprehensible, unchangeable Perfect goodness Beauty Truth Love.

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MAY 07 WED

Ananda - An experience.
M. Sivaram. Vikas Publishing house Pvt Ltd - 1976.

1. Ananda is not an emotion. As / very word indicates emotion move us on to action. Fear is an emotion, & triggers of a cortical reaction. / cortical reaction prepares / individual for fight & flight. Most of / emotions act as triggering stimuli for our actions during life. Ananda does not trigger off any reaction. When one experiences Ananda, he is completely satisfied & blissful. / mind & / body are relaxed. There is peace in / mind, our seers called this - (wisdom).

2. Normally / world we live in is perceived as a space-time bound entity. But after experiencing Ananda, other as yet scientifically not proved, parameters are perceived, not hazily but clearly.

3. A seed can be said to be in (?). once / opportune environment is available, it sprouts & lives in / world. / (?) interval can be millennia even. / seeds found in / tomb of Pharaoh Emperor Tutenkhamen, sprouted in a congenial pot some 2000 yrs later. This also is accepted natural. But if a human being, does achieve voluntarily such a state, we do wonder.

10. Dionysius is noteworthy for having emphasized what is called / via negativa which in essence, is simply / negative side of / mystical consciousness.

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/ mystical consciousness is essentially paradoxical being both -ve & +ve at / same time. on / -ve side it is emptiness, / void, nothingness. on / positive side it is union with / Absolute, / one, / God. It is also pure consciousness & a state of peaceful bliss. C. He speaks of God as / Superessential Darkness .... Emptiness - Void - Nothingness. These words strongly remind an Indian of "[illegible], – [illegible]."

11- It is a remarkable & significant fact // a many able books have been written in recent yrs, one of which likens Eckhart's thought to // of / great Hindu philosopher [illegible] while / other likens it to Buddhist mysticism - Both books attempt to show not mere general resemblances, but point-by-point comparisons in matters of detail. 1st – Rudolph Otto's 'Mysticism, East & West'. 2nd D.T. Suzuki's 'Mysticism, Christian & Buddhist'.

16. Jan Van Ruysbroeck calls / timelessness of / mystical experience, as does Eckhart, "/ Eternal Now".

17. Abu-Ibn Sina (Avicenna):– He is / author of 'Stages of Mystical life'.

18. Jalal Al-Din Rumi:– When a fly is plunged in honey, all / members of its body are reduced to / same condition, & it does not move. Thereby / term Istighraq (absorption in God) is applied to one who has no conscious

existence or initiative or movement. Any action // proceeds from him is not his own. If he is still struggling in / water, or if he cries out 'oh, I am drowning', he is not said to be in / state of absorption. This is what is signified by / words 'Anal Haqq'. I am God. People imagine // it is a presumptuous claim, whereas it is really a presumptuous claim to say "Anal-abd-" I am / slave of God. & Anal haqq" – I am God is an expression of great humility. / man who says [illegible] affirms 2 existences – his own & God's, but he // says [illegible] has made himself non-existent, has given himself up & says I am God – i.e. 'I am naught, He is all'. – There is no being but God's. This is / extreme of humility & self abasement. A state of total self- or Ego annihilation.

19. " Our speech & action is / outer journey
Our inner journey is above / sky
The body travels on its dusty way
The spirit walks, like Jesus, on the sea."

20–21-
Lao - Tze -
The character of TAO. Tao Teh Ching.
Tao is a hollow vessel.
And its use is inexhaustible!
Fathomless!

Like / fountainhead ^ all things
Its sharp edges rounded off,
Its tangles untied.

Its lights tempered
Its turmoil submerged,
Yet dark like deep water it seems to remain
I do not know whose son it is
An image ^ what existed before God.

21. / utility ^ notbeing
Thirty spokes unite around / nave;
From their not-being (loss ^ their individuality)
Arises / utility ^ / wheel.
Mould clay into a vessel.
From its not-being (in / vessel's hollow)
Cut out doors & windows in / house (wall)
From their not-being (empty space) arises / utility ^ / house.
Therefore by / existence ^ things we profit.
And by / nonexistence ^ things we are served.

23. / experience ^ [illegible] is so supremely satisfying // such a person thereafter pursues [illegible] in preference to / worldly pleasures.

Physiology ^ [illegible]:-

34. Stimulation by a tiny bit of electricity ^ an area in / hypothalamus is pleasant &

rewarding. (Expt. rat) / pleasure is greater than food gives to a hungry rat, & greater than sexual satisfaction (hypothalamus of electrode [illegible] rat, — [illegible] food [illegible]

[illegible]; female rat [illegible] [illegible] —)

Such animals later dissected, & / areas housing / tips ^ implanted electrodes mapped out. Deep in / hypothalamus, among / vital centres controlling hunger, sex & sleep processes was / 'area' — i.e. / area surrounding / 3rd ventricle & / central aqueduct.

-------(35):→ These areas → the +ve rewarding sites. Interspersed amongst these → / negative reinforcing areas — also. All these areas are now classified as / Limbic system or / visceral brain.

/ Ananda ē / electrode implanted rat enjoyed or experienced when Dr. James Olds successfully conducted his expt.-show //,

① There are ananda centres in / limbic system ē on stimulation yield supreme satisfying experience.

② Ananda centres are in / +ve rewarding sites ^ Limbic system.

Q. Stimulation ^ / centre makes / animal indifferent to material world & its attractions. (/ centre works against materialism & temporal pleasures)

36. Psychiatric therapy can be successful only if somnas centres are uncovered.
He who has stimulated / somnas centre is in a state ^ being or experience, not volitionally realised in life, by most people. / somnas experience when attained by intense thinking or meditation, seems to erase out all temporal desires... People who have experienced Ananda do not seem to be afraid ^ anything. Fear is based on desire. Instinctive fear is based on / desire or urge to live. Conditioned fear caused by painful experiences ^ life. Fear & Ananda centres should be like 2 sides ^ a coin. If you experience Ananda you have no fear. If you are experiencing fear, then you have not attained Ananda.

Ananda centres are near sleep centres. The sympathetic, parasympathetic nervous systems have / base camps in / hypothalamus. In / hypothalamus are located / vital centres like / cardiac, respiratory & heat regulating ones.

The yogi whose aim is to stimulate / somnas centres thus one ^ several

methods has perforce to get some volitional control on some ^ / involuntary visceral activities like controlling / cardiac activities, or getting into hibernation states like meditation. Feats // are spectacular, but are only side effects ^ / main search, / attainment ^ somnas.

42. Hunger & Ananda:- In politics / role ^ hunger is masked under / name "Liebensraum". People ^ a geographical entity claim as their birthright / acquisition ^ lands belonging to weaker people.

43. / Brain cortex which is involved in / process ^ memory making now dictates & when a person is really hungry, he refuses / available food because he cannot get / food he craves for. The brain cortex makes him angry & this emotional upsurge curbs his natural hunger. / Brain cortex interferes with hunger mechanism in another way also. Suppose a person is busily involved in some fruitful work. His cortex compels him to finish / work in a given time. During this interval he becomes hungry. His stomach starts a 20-30 second cycle ^ contractions, & he is mentally disturbed. Cortex commands him to curb his hunger, reject its demands, continue his work. / Stomach ceases its contractions. After a time he does not feel hungry.

He continues his work in peace. Repetitions ^

Such ever bring processes end up later in stomach disorders & even ulceration. A process classified under / 'Stress Syndrome' – Instead of hunger of / process of evacuation is subject to / stress syndrome, then frequent loose motions & at inconvenient times, result. This is called / 'irritable colon syndrome' – The stress syndrome can manifest itself in a variety of ways in / abdomen.

Hunger centres – in / hypothalamus – clusters of cells in / lateral & ventral part of hypothalamus. Satiety centres near / sleep centre in / median line of / lining of 3rd ventricle. Anatomically situated in / hypothalamus, / hunger & satiety centres are functionally situated in / +ve rewarding sites of / limbic system.

49. Thirst centres – little above / hunger centre in / ventral aspect of hypothalamus.

30 non stimulation of / –ve semforcing areas also yield pleasure... Ananda centre is in / core of / limbic system.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

70. REM sleep accompanied by dreams. Some dreams foretell events // do occur at a future time. REM sleep is considered as a unique type of consciousness, opposed to / wakeful state.

82. During / dream :. a few intensely haunting problems can be solved. Such dreams waken up / sleeper. / solution to / problem is vividly remembered. As an eg: of this I can quote / famous German chemist Kekule, who solved / problem of / structure of / phenol ring, through a dream. Snakes were biting their own tails in his dream.. He woke up & saw / analogy of such snakes & / phenol ring. Addressing / academy he said, "Let us learn to dream, gentleman." Thereafter he read his epoch making paper. Many other problems & deal c day to day life are often solved in dreams....

83. This is physiologically possible because / mind after delta sleep or [illegible] is energized

by something. / mind is free from / fetters of space-time bound phenomenal world. ∴ It can, thro' dreams, solve problems & paradoxes, in dreamy ways. One // can see / analogy between dream-fantasies & / real-world events or circumstances, can come to a decision. But seeing / analogies or parallels is not gifted to many. // is why most people are unable to make use of / dreams. / Few gifted ones, who can see / analogies derive immense benefit from / dreams.

It is not in / field of cortical activity only // dreams help. / More imp. activity of / mind is primed up by / emotional experiences. These activities contribute quite a lot in a life, purposefully or meaningfully lived. In / waking stage, emotions are responsible for 2 types of activities. One is to provoke or stimulate cortical reactions to satisfy / emotions. 2nd type is to express / emotions in creative art forms — literature, specially poetry, paintings, sculpture & more universally music. Very many art expressions with a classical or time-less aspect have been

dreams really come true. Dream & reality

become a homogenous & pleasing unity in famous art forms. And these ever-lasting creations are timeless. Such creative & timeless art forms are possible, because / creative artists can dream after delta sleep or '[illegible]' & get energised. Waking afterwards, they realise // dream forms were absolutely real & their surcharged minds cannot rest till they have given expression to / beauty they have experienced. And in / medium, they are genetically & environmentally trained. I am tempted to pun on 'Environmentally' — / mentally is more profound than / environ.

88. Those who have attained / 4th or [illegible] stage of sleep would have auto stimulated / ananda centres & realised or experienced a higher type of bliss, as Dr Olds' capital rat. In / case of / rat Dr Olds was its god & guru & gifted it with such experience. In humans, his own mental discipline should enable him to achieve / result.... In [illegible] stage / sleeper is completely aware of / inner world of / mind. & is absolutely asleep with reference to / outer or phenomenal world. / Corporeal world & / inner world of / mind seem to be normally curtained off completely. One can

experience / one or / other. but not both at / same time. but our seers say // even this stage can be transcended by a sagacious man, who, living in this world can experience / inner world ↑ / mind & its central symbol = the Atman.

102: 'Fear Centre :- There is a portion ↑ / brain called / cingular gyrus. This is a broad band ↑ brain cortex on / mesial surface ↑ / brain hemisphere. It is mapped area 24 by neuroanatomists. If this area is destroyed in captured monkeys / animals there after lose their instinctive fear ↑ man.

105. fear is ↑ 2 kinds. Instinctual or built in fear, conditioned or learnt fear. Instinctual :- caused by fear ↑ death & pain. By proper understanding ↑ real meaning & significance ↑ death, / instinctual fear can be overcome.

106. one ↑ / basic cause ↑ fear — unknown nature ↑ / cause. / child is afraid ↑ dark, for it cannot see, & ∴ does not know what might be hiding or lurking in / dark. knowledge ↑ / unknown can eradicate fear.

107. Eradication ↑ conditioned fear — by appreciating original cause ↑ fear ... An extreme form ↑ conditioning a fear in / mind is brain washing.

107. Agarophobia — dread ↑ being alone in wide spaces.
claustrophobia — dread ↑ being in closed spaces.
Abreaction :- A therapy — in ē phobia is eradicated by making / person relive his original experience.

120-124 : Pleasures enjoyed in / mundane world stimulate / part ↑ / mind responsible for such enjoyment. // part ↑ / mind dictates / activities ↑ / body to achieve such pleasures. This is / Id part ↑ / mind. That concept formed developed in / mind ē feels it is enjoying pleasures is called / Ego. / part ↑ / mind ē acts in / interests ↑ / society one lives in is called / superego. This part ↑ / mind is also seeded & grows as life progresses. / superego is punitive in its working & is / creator ↑ / weapon "/ guilt complex". obviously superego & Id pull / ego in opposite directions. In / individual mind ∴ / Id & superego are rivals. One may be said to be / 2nd or 3rd rival to / other. Most ↑ life's troubles & tribulations

are / result of this eternal conflict of / Id & / superego.

121. "Let no one tell where I was buried". came from / bard's soul in / moment of awareness of / glory of / [illegible]. The God-drunk Prophet Mohammad directed // his tomb should not be identified.

122. After classifying fear into 2 main gps — ജന്മസിദ്ധ & ആർജിത — / seers studied further / fundamental causes of fear..... The 2 types have a common & basic cause. Ignorance or lack of sufficient knowledge of / essence of life; — അവിദ്യ.

123. True knowledge of phenomenal world eradicates conditioned fear. Sciences are / media thr' which / knowledge can be gained. / instinctual or ജന്മസിദ്ധ fear is because of / unknown nature of / 'I' or what we feel is ourselves. / concept in / mind // informs us // we are / we is based on / Ego. It is only when / ego is well developed // / person is bold, daring & adventurous. If such persons with / ego drive well developed practice continence also they would develop ഓജസ്സ് & തേജസ്സ്... Ojas & Tejas uplift

/ minds towards / path of gaining / knowledge of / 'I'. // is / knowledge of / real knower. Real knower is / [illegible] or [illegible] or / "alone" of Plotinus. In modern physio-psychological language it means // / ananda centres have been auto stimulated. Auto stimulated by / mental processes of / seeker. On experiencing / [illegible] one is in / penultimate stage of integrating / individual self with / cosmic self; / [illegible] & [illegible]; / ultimate stage is reached thereafter when one feels & realises / one alone. / ultimate stage is called കൈവല്യം. / word കൈവല്യം is derived from / root കേവല which means alone. On attaining this state of awareness or consciousness, / instinctual or Ekaki fear vanishes.

124. / Conditioned fear is because of a 2nd or ദ്വിതീയ, & // is / ലോകം, / cosmos. Once this is seen & realised, one is aware of & becomes conscious of / limitless universe. Then / ഈശ്വര or Lord of all this ലോകം is realised. / realisation of [illegible], which is variously called [illegible], ബ്രഹ്മം, God, or / "Alone", eradicates / instinctual or ജന്മസിദ്ധ fear, / fear of being alone. / 'alone' of Plotinus bridges / 'alone' on one side & / cosmos on / other. / alone is / [illegible] or / individual soul, or / essential 'I'.

MAY 24 SAT

126. Like / infant, if an adult can implicitly trust to a father or parent-image, then he will have little to worry about. Such a psychological discipline is called [illegible] or [illegible]. Unconditional and complete mental surrender to an omni-protective God concept. Such a psychological process also relieves / instinctual or [illegible] fear; for then no one is alone, he always has God ē him. / Conditioned or fear due to a 2nd is looked after by / ever-present & omnipotent God. Thus fear of both types fade away if one can thoroughly surrender his ego to a God concept.

127. Fear in modern man has taken on a million masked forms. & he has no God to surrender to, except his physician, who has not yet learnt to heal himself. ..... In most psychiatric illnesses / ego is in jitters.

129. Ananda when experienced cannot be described in words. For / [illegible] is an infinite experience, ē cannot be expressed in words ē are all finite. Even / mind cannot conceive of it, because / [illegible] experience is beyond / reach of mind. If such [illegible] is realised as / ultimate reality, / other name of ē is [illegible], then he is never afraid of anything

25 SUNDAY

MAY 26 MON

anytime.

Sex & Ananda:

131 - In sex, / 'I' is for a few seconds completely forgotten.

132. / ego-effacement occurring in sex, does not lead to a permanent peace of mind. It does result in complete relaxation for a little time, but does not yield / peace of mind // / Surrender of / ego in / religious sense does - but / basic pattern is / same ..... The rational & physiological study of sex is ∴ a rewarding effort, for one who wants to live in peace in this paradoxical world. [illegible]. Through [illegible] one can attain [illegible] or freedom from bondage is a tenet of / [illegible]. / basis for such a statement is / fact // in intense sex, / ego identity is lost.

2 types of sex - [illegible] & [illegible].

141:- Sex centres situated in Rhinencephalon. This part of / brain cortex is / lower & forward part of / bigger temporal lobe. In this, several distinguishable parts are / amygdala, / cingular gyrus & hippocampal gyrus. Lesions in these parts make / experimental animals hypersexual & bold. ..... Memory centres have intimate connections ē sex centres.

141. Sex centres are situated in / Rhinencephalon & / parts surrounding / 3rd ventricle. There parts also containing hunger, satiety

centres. / sleep & arousal centres also. Ananda centres localised in / same area as ^ sleep :- i.e. in / 3rd ventricle area near / midline.

MAY 27 TUE

149 Amongst / 4 basic & prominent instincts, it is in sex (& sleep) / intensity ^ / instinct makes one forget his identity.

ആഹാരനിദ്രാഭയം മൈഥുനം.

ways through ē people relieve tensions built up in / sex centres :-

① Day dreaming

151 ② talk about sex to friends & relations. such talks soon develop into scandals — a pastime ^ most men both civilised or aboriginal. Connected ē it a feeling ^ righteousness also → A well knit family, marriage ē rituals associated to it — sacred relation between partners. Thus sex is deified or made respectable. But when one is angry & starts swearing, he talks of sex in / most humiliating terms. / swearer brings in animals to sex — blasphemy / opponent. parents, grandparents & all are brought in to ↑ / emphasis ^ swearing. And all ē reference to sex. Promiscuous, unnatural modes ^ sex behaviour attributed to /

rival & / members ^ his/her family tree.

when one swears like this vehemently, he is in fact appeasing / growling tigers & sex-repression caged in / depths of his mind. This pattern of behaviour is infantile or childish.

MAY 28 WED

152: / vast amount ^ pornographic literature is an attempt to appease this growling tiger. Both / writer & / readers ^ / book do this. / scientific study ^ sex itself has become / a means ^ appeasing / caged tiger.

153 / scientist & / scientific mind chooses sex as his subject & tame his growling tiger

③ voyeurism — or window shopping. Looking at / display — in bathing ghats, on magazines, sexy scenes etc

4. Sublimation thro creative art forms. and by dreams: Function ^ dreams include wish fulfillment, solving unsolved problems ^ / day, glimpse ^ / future. though such instances are rare, they are well documented & confirmed. It is this quality ^ / dream mind / makes one believe / / ananda centres recharge / mind. Stimulation ^ / ananda centre is / hallmark ^ / prophets. / prophets as / very name indicates / are able to see into / future. In dreams if / future is foreseen then / mind should have been changed in some way.

Ananda centre effects this change. / mind then

glimpse at future. This glimpse appears as a dream, where the person comes up to the REM sleep stage. For [illegible], space or time

MAY 29 THU

are no longer bondages.

159: The [illegible] or mental components of sex blossom out into 'Platonic love'. ... It is love or affection for one of opposite sex entirely free from sensual desires.

160. Platonic love stage is virtually the penultimate stage in [illegible] in the areas round about the [illegible] centres are constantly stimulated by his own concentrated thoughts.

161. Constant & intense devotion & meditation enable them to stimulate the ananda centres thro' their own thoughts. When they experience the nondual pleasure & return to the normal stage later on, they usually burst out in lyrical expressions. They use the medium of divine or glorified sensuous sex to describe their extraordinary experience. The Sufis, for Islam for eg, sing of themselves as the wedded wife or wives of God — Allah is their beloved.. ~~[illegible]~~ eg: — Shamsh Tabraiz..... This is the language of love-lorn Gopi crying her heart out for

Communion with her beloved Krishna.

162. [illegible]
[illegible]

MAY 30 FRI

[illegible]
[illegible]
[illegible]
[illegible]
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[illegible]
[illegible]
[illegible] ? പറയൂ സഖിമാരെ.
([illegible] വിവാഹിതയായിരുന്നു. [illegible]
[illegible])
[[illegible] = [illegible]] [illegible] = [illegible]
[illegible]:—
[illegible]

[illegible]
[illegible]

MAY **31** SAT

[illegible]
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[illegible]
[illegible]
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[illegible]
[illegible]
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[illegible]

I have loved & surrendered myself to one who is deathless, whom none can hurt or damage. Who is not form-bound, I have loved & surrendered myself to one who is unbound by space, who has transgressed time, who never needs to pay any penalty. & who has no particular symbol or identification. Oh, mother mine, listen to me, I fell in love to the one who is afraid of nothing, who is fearless. Because of these Chenna Mallikarjuna is my

1 SUNDAY

MAY	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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beautiful husband. The husbands who die and decay, should be pushed into a fiery oven.

JUN **02** MON

167. Annihilating sex urge, & in essence celibacy, can & does facilitate the achievement of [illegible]. It helps a person to stimulate his [illegible] centres by meditative mental process, more easily.

169: Virile appearance — called Tejas. Celibates & Brahmacharis had this glow & virility — This is because of testosteron. .... In addition he has ojas. He is not only virile and strong but also marked ability for creative works & intense mental activity! People who have healthy germ cells but do not use them enjoy [illegible] — instead of seedling & producing progeny, they produce much more longlasting ideas & thoughts. They become true creative artists. .... Ojaswin utilise creative ability to pursue & attain the nondual Ananda. While the creative artists ecstasy for a little time. We call this spiritual progress. Ojaswins are dedicated to spiritual advancement & progress. They are not much interested in the phenomenal things, but are compulsively attracted to the noumenal

JUL	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T
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things. They are introverts not extroverts. Jains & Sankara were Brahmacharis....
Brahmacharya could be practised not only by the bachelors but by the married ones too, & it literally means movement towards [illegible].

172. Brain cells are like storage batteries of motor cars. The fluid contents contain electrolytes. Any activity of the cell alters the chemical composition of its contents & thus the electrolyte balance. + ions accumulate at one edge of cell. This edge or side of cell can be called [illegible] edge. On the opp. edge — ve ions. (cathode end) Brain cells are surrounded on all sides by other brain cells. Interspersed between the cells → connective tissue & provide the stable housing for br. cells. One brain cell can communicate with numerous br. cells around it. But it communicates only with a particular neighbouring cell. Cathode of the 1st cell is adjacent to the anode of the neighbouring cell. A tiny current of electricity passes on to the cell. The pathways in the brain are thus specifically laid out, so the communications between cells responsible for a particular function is made easy & facile. The conduction of tiny bit of electricity between the cells is in series, electrically speaking.

174. Chemical reaction has converted the [illegible] energy to electrical energy.

176 Auto stimulation of ones own Ananda centres can, in very rare cases, become continuous & effortless. To them this process becomes [illegible] or natural.

177. Thought is a form of energy. They produce electrical changes in brain cells. .....
Thoughts produce bio-chemical & biophysical changes. Tiny changes in the electrolyte balance in the fluid contents of the brain cells. Biochemical & biophysical changes enable a person to stimulate Anandacentres. This can happen only when the mind is disciplined in one of many ways. ..... The chemical comp. of br. cell depend upon the chemical composition of blood.

188: Psychedelic drugs & allied potions just provoke the desire for [illegible], but make one incompetent to achieve it. They inhibit one from pursuing the substance of Ananda. Real ananda is achieved only through meditative efforts — not by external agents.

200:— What is the type of energy which functions in the [illegible] centres? It obviously is not just

mind-energy. Experiencers ^ [illegible] have unequivocally said // during their beatific & rare experience, they have lost all

sense ^ time & space. They have also lost all interest & awareness ^ / phenomenal world, as long as / experience lasts.

206. During [illegible] experience a cosmic awareness is gained - / type ^ energy // / entire work as may be compared to / gravitational energy or force // abounds in / cosmos. It holds / planets in their orbits & move them unceasingly. On a cosmic level it plays ē / stellar galaxies & whirls them round, now contracting & now expanding / fields ^ play. On / microcosmic level it plays ē / mind-body complex.

The '[illegible]' or cosmic type energy lasts for a particular duration ^ time. Returning to / normal or phenomenal world-experience / person retains vivid memories his experience.

209 Behaviour pattern after experiencing Ananda — ([illegible] of [illegible])

240-241 Mental activities - 3 types. (1) attention to external world & activities related to //. (2) attention to / internal world ^ / body & activities related //. (3) other

activities ^ mind not clearly understood but their presence confirmed by direct personal experience, aesthetic experience, mystical experience, --- This type ^ activity is exalted & efficient when germinal cells ^ / gonads are not stimulated into activity. This is [illegible]. [illegible] has [illegible] also. But all [illegible] need not necessarily be [illegible]. Aesthetic & spiritual activities are enhanced & made easy in [illegible].

241. Sexual behaviour ^ an [illegible] [illegible]. 2 kinds. (1) If married he functions as an ordinary house-holder to all appearances. He has [illegible] & looks virile. But sex is a casual thing ē just happens. (2) If a [illegible], both [illegible] & [illegible]. While, alternative, mind focussed on [illegible] always - absolutely indifferent to sex & its multifaceted manifestations.

247. / behaviour pattern of [illegible] shows no mental illness at all. He does not suffer from or show signs ^ anxiety neuroses hysteria, obsessional syndromes, paranoid

features of Schizophrenia. They live like normal persons & seem to be so to others. In times of catastrophic grief

JUN 07 SAT

or adversity they behave as if unruffled. / calm & poise // they exhibit has / peculiar quality of calming & consoling others who are present. / scientists know // this telepathic calming effect does happen but how? Science does not know yet. + ve mental health may be capable of effecting this, but it is more probable // spiritual health has a good part to play in this phenomen-on.

250-251 — I can avoid particular things without hating them. I like coffee. Coffee is a [illegible] — But if it becomes cause of ill health to me, I can avoid it without hating it. // Holy lack of culture of a person, arrogance, stupid talks etc — I can avoid him without hating him.

8 SUNDAY

254. Hamlet -- "To be or not to be."
Arjuna was in / same dilemma. Lord Krishna used persuasion, suggestion & psychotherapy to solve his problem.

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

273. Each individual lives in 2 worlds — the external & / internal world of his mind. 274. [illegible] has effected a brilliant synthesis of these 2 worlds. He has / best of both / worlds.

JUN 09 MON

278. A child usually get into / infancy stage of sleep. Its mind is not yet cluttered by life's competitive experiences. So its REM sleep is light & slight. 'Id' needs are taken care of by / parents or elders. So are / emotional needs. Sheltered thus, / child does not need much of REM sleep. ..! / child's dreams are pleasant & simple.

279 — In [illegible], / 4th or [illegible] sleep dreams & these gifted of / Gods, remember their ineffable experience. 'Christ is born in me' is an expression to describe this ineffable experience. 'From / alone to / alone' is another // description. [illegible] is / term used by [illegible] India.

Page 282: — An Anandanubhavi has experienced the non-dual bliss. A limitless oceanic feeling of satiety & happiness. In such a person, all // desires do enter into life as in

JUL T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

normal beings. But because his mind, like ocean is steady and

JUN 10 TUE

infinite, / desires do not cause a ripple or upset. All / entering desires silently merge in & vanish.....
If / mind once gets / experience of autostimulating / Ananda-Centres, then it becomes firm like a rock. At // stage he is in full control of his Id compulsions & emotional aberrations. Even so he continues to live in this world. His id is very much alive. But / id urges do not upset his equanimity or peace of mind. / flowing in of / sensory & / emotional rivers does not upset / steadiness of / ocean, because quantitatively / amount of water carried by / rivers is infinitesimal ~~as~~ compared to / quantity of water in / huge ocean. Likewise / id compulsions compared to / oceanic [illegible]. Hence / peace of mind of an [illegible] is not rippled by / desires. It is anchored on to the firm & permanent primordial entity, / [illegible].

(Compare with my childhood experience of [illegible], & [illegible] in its entire.)

JUN 11 WED

287. [illegible] means being one with / primordial cause, whatever it be, returning to / original source from which we have come over crore & crores of yugas or billenia. / [illegible] proves // this state can be realised in this life & in this world. [illegible] was another term used to describe such an [illegible]—
289— / measurement of Ananda — in [illegible] — [illegible].

A Comprehensive Anthology of fundamental writings — Eastern Mysticism — Vol I. The near east & India — Raymond Van Over — A Mentor book — New American Library. 1977.

Page 2. What Jacob Boehme called '/ signature' of life is perhaps written with in every seed, every cell of / brain, every thought // speeds thru our minds. But humanity, as Boehme saw with his special vision has a unique signet involving their ultimate self revelation; / conscious understanding of / microcosm within & / universal macrocosm

cont. This is / signature ^ divinity // mystics see written c̄ in / souls ^ human beings. ..... If one sees humanity as an insignificant particle in / immensity ^ space, a cosmic accident, then any importance given / human condition or a concept ^ 'Self' becomes an ironical joke. Should we then consider individuals as grains ^ sand in a huge cosmic desert? Or are we all part ^ a universal field? Is one destiny personal & circumscribed alone, or is it simultaneously personal & interpersonal? Are we so self contained in one individual consciousness // only functional & mechanical answers are possible? or do we function c̄ in a transcendental existence, living as yet untouched by its deepest significance?

3. An individual has / option to determine his conscious effort either: ① alienation from this natural hierarchy ^ cosmic forces, or. ② identification c̄ its principles, thereby becoming part ^ its function. / 1st is dehumanising, / 2nd augmenting & integrative. This identification necessarily results in / human being evolving from a limited awareness to a larger vision,

a unified, even universal perspective ..... In medieval times there were 2 acknowledged ways ^ gaining knowledge, one was ratio, or discursive reasoning, / other was intellectus, & involved gratitude of creative insight, imagination, or intuition. Intellectus was believed / higher faculty, one involving a more profound understanding ^ / world. This higher insight provided / artist, philosopher & mystic c̄ inspiration & vision.

4. The eminent physicist Max Planck wrote in his autobiography:— "When / pioneer in science sends forth / groping fingers ^ his thoughts, he must have a vivid, intuitive imagination, for new ideas are not generated by deduction, but by an artistically creative imagination." ....

People are beginning to talk in terms ^ a new 'spiritual dimension' in / philosophy ^ science. This revolution seems most concentrated in Atomic physics & psychology. These disciplines have always included a small no: ^ scientist philosophers who have theorised about what amounts to a mystical (or intuitive) view ^ universe. / convergence ^ science & mysticism has traditionally occurred in / hermetic, occult, or theoretic realms, but it seems / / deeper

modern science delves into basic life processes, / closer it comes to describing / world in 'real' terms — as well as theoretical — (?) really of mystics.

7. In describing the paradoxical dilemma a strict rationalist would encounter, J. Robert Oppenheimer wrote:— "If we ask whether / position of / electron remains / same, we must say 'no'. If we ask whether / electron's position changes ē time, we must say 'no'. If we ask whether / electron is at rest, we must say 'no'. If we ask whether it is in motion we must say no."

What were once metaphysical mysteries, such as / paradoxes of time-no time, simultaneous existence - nonexistence, self fulfilment resulting in self- extinction have come full circle from / cosmic dreams of ancient Eastern philosophers to / cloud chambers of modern physics laboratories.....

Some scientists see / basis of life as a mystical poem. A good eg: is Albert Einstein: "The most beautiful & most profound emotion we can experience is / sensation of / mystical. It is / source of all true science. He, to whom this emotion

is a stranger, who can no longer wonder & stand rapt in awe, is as good as dead. To know // what is impenetrable to us really

exists, manifesting itself as / highest wisdom & / most radiant beauty ē our dull faculties can comprehend only in their primitive forms — this knowledge, this feeling is at / centre of true religiousness"....

Science now confirms // / world is a vibrating pulsating living thing ē in ē we, puzzled human beings, are an integral and important part.

9. Eastern mystics were generally activists in // they headed monasteries, were philosophers & even political leaders. Examples include / Buddhist patriarchs, / Indians Sankara & Ramanuja, & Sufis like al-Ghazali & Mohd. Iqbal.... The term mystic has several origins. It derives from / Greek 'mustes', an initiate from / verb / muein, to close / eyes or mouth & thus keep secret. Its most frequent use was in / rites & initiations of / Greek Eleusinian mysteries. In this sense it can mean hidden truth, esoteric ritual, or even / inner meaning of something. 9-10:— A mystic who had been initiated into / mysteries was considered reborn,

to have gained enlightenment into deeper ideas.

10-11. Mystical experiences generally fall into 2 broad categories those in which feeling or

JUN 17 TUE

emotion predominates, & those in which experience is noetic or cognitive-intuitive, & occurs predominantly thru / mind. / feeling experience is often described in emotional terms of love, or even sensations & is more common to religions // emphasize devotion, love, submission to God's will, like Sufism, Thevaram & other Hindu sects, Christianity, Pure land Buddhism. A good eg. of this type of emotionally overwhelming experience was scribbled on a scrap of paper sewn into Blaise Pascal's jacket & found after his death.

"From about half past ten in evening to about ½ an hr after midnight.

Fire.

God of Abraham, God of Isac, God of Jacob
Not / God of philosophers & scholars.
Absolute Certainty! Beyond Reason.
Joy. Peace.
Forgetfulness of / world
& everything but God.
/ world has not known thee.
But I have known thee

JUN S M T W T F S S M T W T F S S M T W T F S S M T W T F S S M ✿
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 ✿

Joy! Joy! Joy! Tears of Joy!

JUN 18 WED

The persian mystic-poet Baba Kuhi of Shiraz (d. 1050 AD) describes / same total absorption of / mystic experience:

In / market, in / cloister — only God I saw.
I opened my eyes & by / light of His face around me
In all / eyes discovered only God I saw.
Like a candle I was melting in his fire.
Amidst / flames outflashing — only God I saw.

12. S. Radhakrishnan emphasizes / noetic-quality which he calls integral thought. He believes // mystical consciousness brings things into a new pattern or perspective; integrating them into an intuitive reality instead of breaking them into parts as in analytical or discursive thought. Mysticism results in an insight // unifies previously disparate elements of life.

13. ...

JUL T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

She was Queen of Egypt

Winifred Holmes. (G. Bell & Sons Ltd London) 1959.

Wandering story teller — from village to village — half singing half reciting, accompanied on a rebab — / poeti' viol —

The stories unfold themselves to plaintive music of the single stringed Rebab — (Compare [illegible] — Ektara — north Indian Bauls —)

Hatshepsut

Aahmes I founder of 18th dynasty — sent out Hyksos. (great grand father of Hatshepsut)

Grandfather — Amenhotep I — The 2nd Pharaoh of 18th dynasty.

next Pharaoh — father of Hatshepsut — Thotmes I.

her mother Queen Aahmes.

her ½ brother Thotmes — son of her father & a woman of lesser blood — later to become her husband.

Thoth — / celestial messenger God of writing, mathematics, medicine & Magic.

Thothmes = son of Thoth

(Compare [illegible])

Hatshepsut — means = chief of noble women.

Page 18. Women in ancient Egypt were the owners of property. Inheritance went thro' them.

26:- In Thebes / queen was crowned, enthroned a queen / throne name Ka-ma-ra, child of the Sun + ∪ γ. [Compare Khmer [illegible] — Both belong to Indian traditions — or are related to it, I think.]

27. old name of Egypt :— Ta-mery. [illegible] —

30. [illegible] - ([illegible])

38:— Hatshepsut records, he (Amun) came to her in a dream & asked her to establish a "Punt in his house." Punt was / ancient Egyptian name for a vague country far to the South-East. a fertile coast where the precious frankincense trees grew & to which Egyptian expeditions sometimes went to trade & bring back / incense resin

JUN 21 SAT

needed for burning at temple ceremonies. No one today knows exactly where Punt was: Somaliland, Zanzibar, south coast of Arabia have all been suggested by historians & geographers...... She sent a trading fleet to Punt to bring back / living trees & plant them in Amun's garden in / Karnak temple enclosure. / expedition is documented on / temple walls ^ Deir el-Bahari. 5 ships — / expedition reliefs on / temple wall show them sailing along / ist ē Nilotic fishes & later ē Red Sea fishes under their keels. Marine biologists have identified them & stated // they are identical ē those found there today.

39. The chief of Punt whose name was Perihu, (Perehu) received them kindly & graciously accepted / presents her Majesty / pharaoh had sent him. His wife, depicted in / reliefs as being enormously fat, & his children crowded round in excited curiosity & all ^ them were delighted ē a statue gp of Hatshepsut ē Amun. / statue was set up there & then on / shores of Punt as a memorial to / occasion..... It has never yet been discovered

22 SUNDAY

JUN S M T W T F S S M T W T F S S M T W T F S S M T W T F S S M
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

JUN 23 MON

by archaeologists.

39-40 — The boats were loaded very heavily ē / marvels of the land of Punt, all goodly fragrant woods... heaps of incense resin, of fresh frankincense trees, ē ebony & pure ivory with green gold of Emu.... There was eye cosmetic, panther skins and a regular menagerie of live baboons, monkeys, birds, dogs and a Panther specially caught for her. Some ^ / people of Punt ē their children were sent to Egypt too.

40: The voyage there & back had lasted 2 years........ Punt has been transferred to Thebes. 31 frankincense trees were planted in the temple enclosure of Karnak. "I have made for him (Amun) a Punt in his garden, just as he commanded me. It is large enough for him to walk abroad in it."

[[illegible] expedition [illegible].

Nefertiti: — 150 [illegible]

Thotmes III (Hatshepsut's husband)

↓

Thotmes IV

↓

Amenhotep III

JUL T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

his wife Tyi. [illegible]-

↓

Their son Amen-hotep was Nefertiti's half brother & husband.

Nefertiti was the daughter of a ? Syrian princess. Cuneiform tablets record of King Dushratta (Bro's so?) of Mittani sent his sister, princess Galughipa to Pharaoh's harem ē 317 of her chief women & valuable presents.

Amun hotep means "Amun is satisfied"
Amun hotep Nefertiti's husband → Displaced Amun ē Aten.

Amun-hotep's tutor was "Ay" and his wife Ty ([illegible]) and Queen Tyi's half brother, / solar priest at / sun temple at Hermonthis, Queen Tyi herself helped him in this.

Nefer, Neferu-Aten Nefertiti - the great royal wife, / beloved lady of both lands - living & flourishing forever eternally.

[illegible] 3000 [illegible]



New name adopted by Amenhotep – Akhnaten. "It is well ē the Aten".

The temple of Aten :– without roof, open to / sky, no inner shrine for / priests to go into alone – no image ^ god – no darkness, no mystery separating / God from his people. ([illegible])

Aten shone on all alike & / reliefs on / walls ^ / sun's disc ending in rays ē hands blessing / world were just a pictorial representation ^ an abstract idea ([illegible])

Akhtaten → horizon ^ / Aten.

Tutankamen & Semenkhare were Akhnaten's (Amenhotep) brothers. Also his son-in-law.

/ new city built → Tel el Amarna – from / tribal name ^ Arabs who settled there long after –

1000 yrs after Nefertiti – cleopatra daughter of Ptolemy XI – the flute player.

54 BC → when Cleopatra was 14. Pompey's general came to Egypt to give / throne back to her father & to depose her elder sister Berenice IV who had usurped his throne.

At 14 cleopatra was a scholar speaking several languages, fond ^ philosophy, & mathematics & poetry. — A religion an amalgam ^ ancient Egyptian & Greek cults – ē rather no ethical system, which worship / goddess ^ love Aphrodite (Egyptian Hathor) — Mark Antony accompanied Pompey's general Gabinius to Egypt & cleopatra saw him at / age of 14. Antony saw her & described her as an exquisite flower.

Ptolemy XI died when cleopatra was 18. Cleopatra VI (as she is called) had to marry Ptolemy XII (her brother) & rule / country. He was 10 yrs at / time.

At ^age 22, she came to know Caesar.

In ^47 BC she was wedded to Julius Caesar – reckoned as / beginning ^ her reign by Egyptians – (Amun-caesar)

Their son – Caesarion.

In 47 BC cleopatra ē Caesarion & her

little brother & consort Ptolemy XIII visited Rome.

Physician of Cleopatra — Olympus.

In the Ides of March 44 BC → murder of Caesar. Ptolemy XIII disappeared.
Caesarion was renamed Ptolemy-Caesar-
In Caesar's Will Cleopatra & her son were not even mentioned. She returned to Alexandria c̄ her son.
At / age of 29 she was summoned by Mark Antony to Tarsus in Asia Minor.
He gave up his future in Rome, followed her to Alexandria. Twin children were born to them —
Alexander Helios, the Sun and Cleopatra Selene — / moon -
10 yrs they lived together & she bore many children for him.
Antony after marrying her, even repudiated his Roman wife, Octavia, Octavian's sister...

At the age of 39 — she died — in / upper chamber of her mausoleum.

'Surely you're Joking, Mr Feynman'

Adventures of a Curious Character.

Richard P. Feynmann - Bantam Books 1989 Edition./
At / age of 11:— [illegible]
Sine, Cosine & tangent of every 5° → start c̄ / sine of 5° as given, by addition & ½ angle formulas // are worked out..... He didn't know / symbols for sine, cosine, tangent.
sin f = Sin, i times, n times f.

The tangent (derivative) of / minimum (lowest point) of any curve is zero (horizontal).
Feynmann had invented new methods of doing quantum mechanics c̄ path integrals (Page 155)

Brewsters angle:— / angle at c̄ light reflected from a medium c̄ an index of refraction is completely polarised. / light is polarised perpendicular to / plane of reflection — / tangent of / angle equals the

index.



JUL 01 TUE

Tangent of the angle of refraction = Index of refraction. (/ See Page 217 of my book) -

Direction of light is / direction in which you see something when you are looking at it.

Page 287.

Dresden Codex. number 584.
Divided into pds of 236, 90, 250, 8.
no: 2920. 584 x 5.
also 365 x 8.

A table ^ multiples of 2920 upto 13 x 2920.
Then multiples of 13 x 2920 for a while.

583.92 pd of venus as it appears from / earth.
236, 90, 250, 8 → phases of venus.
It is a morning star, then it can't be seen (on / far side ^ sun), then an evening star, & then disappears again (ie between / earth & sun.

JUL	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

JUL 02 WED

90 & 8 are different because venus moves more slowly when it is on / far side ^ sun compared to when it passes between / earth & / sun.

/ difference between 236 & 250 → might indicate a difference between / eastern & western horizons in Maya land.

Page 288.

Another table - had pds ^ 11959 days — for predicting lunar eclipses.

another table multiples ^ 91 in descending order. (Feynman says he did not figure / one out nor has anyone else.

Mr Eric Thompson wrote // by looking at / table (^ venus) you can deduce that / Mayans calculated / correct pd ^ venus.

Use this number 4 times & // difference once, & you get an accuracy ^ 1 day in 4000 yrs. (Feynman thinks // remarkable since / Mayans designed for only a few hundred years)

The exact figure → 583.923.

AUG	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Feynman later found out // those funny numbers he thought before

JUL 03 THU

were errors were really integer multiples of something closer to the correct pd (583.923), // Mayans had realised // 584 wasn't exactly right!

Some homework

584 x 1	365 x 1
584x2 = 1168	" x2 = 730
x3 = 1752	x3 = 1095
x 4 = 2336	x4 = 1460
x 5 = 2920	x5 = 1825
	x6 = 2190
	x7 = 2555
	x 8 = 2920

(2920 days :-).

2920 x 1 = 2920.	2920x9 = 26280
x 2 = 5840	2920x10 = 29200.
x3 = 8760	2920x11 = 32120
x4 = 11680	2920x12 = 35040
x5 = 14600	2920x13 = 37960
x6 = 17520	
x7 = 20440	
x8 23360	

JUL 04 FRI

i.e 18 times 2920. or 13 x 2920. is
584 x 5 x 13. or
365 x 8 x 13
=
584 x 65 = 365 x 104

ഭൂമിയുടെ 100 വർഷം ശുക്രന്റെ 65 വർഷം.

Consider വ്യാഴം - 365x12 = 4380 ദിവസം, 1 cycle.

4380 = 365 x 12.

```
      7.5
584 ) 4380
      4088
      ----
      2920
```

= 7.5 x 584 = } വ്യാഴം, ശുക്രൻ, ഭൂമി-
365 x 12 = }

Consider ശനി; 30yrs = 365x30 = 10950

i.e ശനിയുടെ 10950 days or 1 circle =
18.75 of ശുക്രൻ
2.5 of വ്യാഴം.
30 of ഭൂമി.

```
      18.75
584 ) 10950
       584
      ----
       5110
       4672
      ----
       4380

       2.5
4380 ) 10950
        8760
       -----
       21900
```

Find out
? 11959 days table :

JUL 05 SAT

deff 11959 −
10950
1009 days.

32.764383506849 3123
28767

365) 11959
1095
1009
730
2790
2555
2350
2190
1600
1460
1400
1095
3050
2920
1300
1095
2050
1825
2250
2190
3500
2920
1800
1460
3400
3285
1150
1095
550
365
1850
730
120

1200
1095
1050
730
3200
2920
2800
2555
2450
2190
2600
2555
450
365
850
730
120

32.7 taken as 33 – (See
It is also $\frac{400}{12}$ page 259 – my book)
smallest $\frac{100}{3}$.

131.41758241…

91) 11959
91
285
273
129
91
380
364
160
91
690
637
530
455
750
728
220
182
380
364
160
91
690

6 SUNDAY

JUL T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

2 $\frac{56}{38}\frac{112}{76}$ $\frac{28}{19}$ = 1.46 = 1.5.

JUL 07 MON

32. 764, 383, 506, 84931, 23287671, 23287671, 23287671, ------
Recurring decimal.

20.4777397089023, 9708, 9023, 9---

584) 11959
1168
2790
2336
4540
4088
4520
4088
4320
4088
2320
1752
5680
5266
4140
4088
5200
4672
5280
5266
1400
1168
2320
1752
568

2.7305317351143
242009225

4380) 11959
8760
32990
30660
23300
21900
14000
13140
8600
4380
32200
30660
15400
13140
22600
21900
7000
4380
12200
13800
18200
17520
6800
4380
14200
13140
10600

10600
8760
18400
17520
8800
8760
40000
38920
10800
8760
1040
8760
1640

AUG F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

JUL 08 TUE

2920 x 14 = 40880
2920 x 15 = 43800
2920 x 16 = 36720
2920 x 17 = 39640
2920 x 18 = ~~12~~ 48560
2920 x 19 = 55480.
x 20 = 58400
x 21 = 61320
x 22 = 64240
x 23 = 67160
x 24 = 70080
x 25 = 73000

2920 x
34
11680
8760
99280

2920 x 18 = 23360 / 2920 / 48560
2920 x 19 = 26280 / 29200 / 55480

[illegible]. compare [illegible] figures

2920 x 25 x 100 = 7300000
[illegible] = 7022388
ie diff = 7300000 − 7022388
[illegible]. 277612

JUL T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

JUL 09 WED

[illegible] = 365 x 4000 = 1460000 [illegible].

1460000 [illegible]. = 2920 x 500 ie
584 x 5 x 500 or
584 x 2500 − [illegible]
[illegible] 4000 [illegible] = [illegible] 2500.

[illegible] → ? = 1460000 / 4380

333.33
438) 146000
1314
1460
1314
1460
1314
146

[illegible].
584 x 5 = 2920 [illegible]
365 x 8 = 2920. [illegible]
2920 x 15 = 4380 − [illegible].

[2920 is the cube root of 24897088000]

[illegible] : [illegible] : [illegible] : [illegible].
1 : 18.75 : 2.5 : 30.
2 : 37.50 : 5 : 60
4 : 75.00 : 10 : 120
10950 x 4 : 584 x 75 : 4380 x 10 : 365 x 120
43800 : 43800 : 43800 : 43800 [illegible].

AUG F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

ഉത് 120 വർഷങ്ങളിൽ.

Calculate for 4000 yrs. 4000/12 = 333.3 yr

JUL 10 THU

365 x 4000 = 1460000 days. [illegible]
584 x 2500 = 1460000 days. [illegible]
4380 x 333.3 = 1460000. [illegible]
10950 x 134.246 = 1460000. [illegible]

Calculate twice of these figures.
365 x 8000 = 2920000 [illegible]
584 x 5000 = 2920000 [illegible]
4380 x 666.666 = 2920000 [illegible]
10950 x 268.492 = 2920000 [illegible]
→ [less 1009 days from 11959 in Mayan]
[illegible]
[illegible] diff = 2702388 −
2684920
117468

1673 [illegible] x 70 = 117110 (See page 367 & 369)
1673 " x 80 = 133840.

A figure between 70 & 80 :- find out that number.

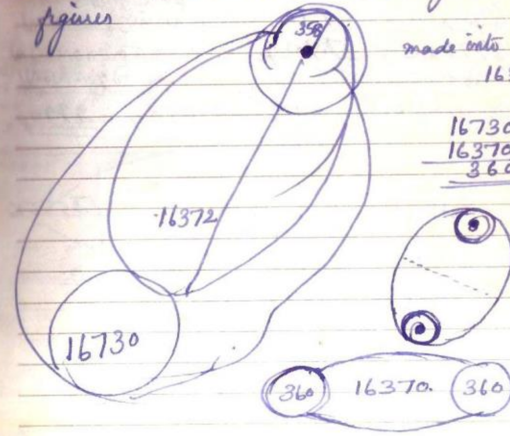
117468 − 117110 = 358

133840 − 117468 = 16372

117468.
133840 ← → 16372. I 358 ← → 117110.
358

JUL 11 FRI

On a number line. On a cyclical figures



made into 360+ 16370.

16730 −
16370
360.

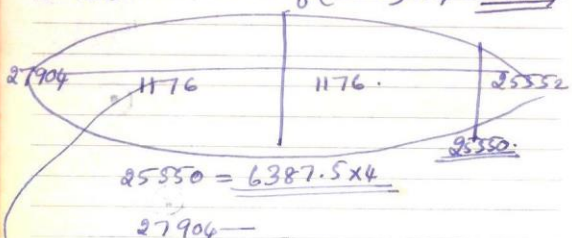
11959 (See Mayan Calendar.)

11959 —
11704
255

JUL 12 SAT

Why multiply ē 4 ? [illegible]

679 × 4 = 2716
6976 × 4 = 27904
6388 × 4 = 25552
[illegible] (6976) × 4 = 27904



25550 = 6387.5 × 4

27904 —
25552
2 | 2352
1176

[In believe 27 & 25.
[illegible] taken 27. [illegible] also 27. [illegible] 24.]

13 SUNDAY

[illegible] (Page 37)

JUL 14 MON

768 +
114
393
575
372
2222

444.4

5 | 2222 = 444.4

444 +
366
810

6976 +
810
7786

6976
2222
9198

9198 —
7786
1412

706 +
706
1412

608
366 −
242.

703 +
703
1406

6.26103

6976 43800 43800 43800 53440 48560 ...

Another table – multiples of 91.
91

91 × 2 = 182
× 3 = 273
× 4 = 364
× 5 = 455
× 6 = 546
× 7 = 637
× 8 = 728
× 9 = 819
× 10 = 910
× 11 = 1001
× 12 = 1092
× 13 = 1183
× 14 = 1274
× 15 = 1365
× 16 = 1456
× 17 = 1547
× 18 = 1638
× 19 = 1729

JUL 15 TUE

[illegible] table descending order of Dresden codex [illegible]

i.e –
1729 → [illegible] +1.
1638
1547 → [illegible] 153 [illegible]
(1456) [illegible] 146. (45+1) / 2 (27+3)
1365
1274
1183 Page 82
1092
1001
910
819
(728) $(24+3)^2$ – See Page 82
637
546
455
364 → [illegible] 1. 364+2 for [illegible]
273
182 [illegible]
91.

See Page 104–105.

91 × 19 = 1729

[illegible] = 172800 mt

[more resemblance to Mayan System]

JUL W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

$\frac{11959}{91}$ = 131.41,758241,758241,758241 ....

JUL 16 WED

See Page 161. [illegible] $\frac{31680}{7}$.

$\frac{22}{7}$ = 3.142857,142857,142857. ....

142857 [illegible]
758241 recurring decimal

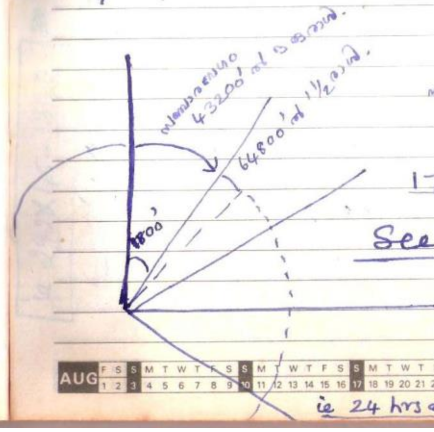
i.e: $\frac{11959}{91}$ [illegible] π [illegible] – see Page 109. $3\frac{1}{7}$
.428571....–

See Page 65. 976 × 2 = 1952.
(19 × 100) + 52. (52 wks) = $\frac{364}{7}$

$\frac{52}{7}$ = 7.428571, 428571 .....

1 [illegible] = 30 × 60 = 1800′
× 4 = 7200′

[illegible] = $\frac{172800}{4}$
= 43200′.



172800′ [illegible] 4 [illegible].

See Page 98

120° 90° + 30
30 × 4 [illegible]

AUG F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

ie 24 hrs of 120 [illegible]

$\frac{172800}{7200} = 24$ hrs.

[illegible] 120 [illegible]
[illegible]
[illegible].
(Also see Page 140 for 90° [illegible]. [illegible] 3°-45' [illegible] 24 [illegible])

Page 159 [illegible] 90 [illegible] 91 [illegible] Dresden Codex [illegible].

24 = Sine ∧ Colatitude. (Page 172 [illegible])

[Dresden codex [illegible] 91 [illegible] multiple [illegible] 819 (91×9) [illegible].
818 [illegible] — (See Page 229 of my book. If [illegible] = 818, [illegible] 10109]

11958 = 1996 × 600 — [[illegible] Successor]
[[illegible] formula [illegible]

11959.

[3423 − 427 = 2996 (2116) × 20 = 59920 × 30 = 1797600]

See after a few pages —

(Written vertically in the left margin: [illegible] multiply [illegible] vertical [illegible] X 1 [illegible])

11959 × 2 = 23918		2	391	8
× 3 = 35877		3	587	7
× 4 = 47836		4	783	6
× 5 = 59795		5	979	5
× 6 = 71754		7	175	4
× 7 = 83713		8	271	3
× 8 = 95672		9	567	2
× 9 = 107631	1	0	763	1
× 10 = 119590	1	1	959	0
× 11 = 131549	1	3	154	9
× 12 = 143508	1	4	250	8
× 13 = 155467	1	5	446	7
× 14 = 167426	1	7	542	6
× 15 = 179385	1	7	638	5

(Column headings above the right-hand columns: [illegible] / [illegible])

(Written vertically in the left margin: ie 292 × 45 = 13140.)

11959 × 11 = 131549.

$\frac{11959}{91}$ = 131.41758241...
[illegible]

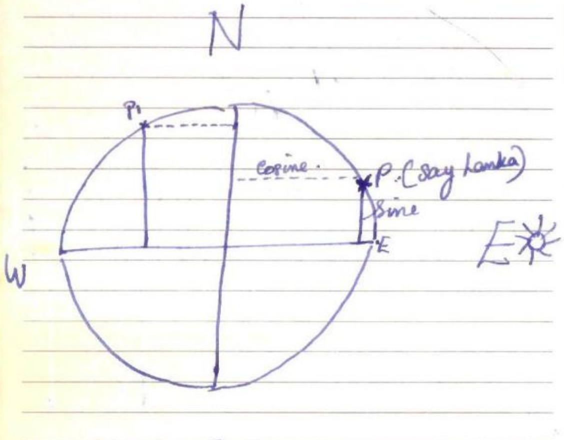
also note, 13 — 154 — 9.
154 [illegible]

The Memoirs of Raymond Poincare
(1913-1914) Translated & adapted
by Sir John Arthur

JUL 19 SAT

William Heinemann - London 1928.

Vol II. 1914 -



20 SUNDAY

ജ്യാ [illegible] : [illegible] ഭോർജ്യാ

[illegible] കോടിജ്യാ-

വൃത്തത്തിലെ ഒരു ബിന്ദുവിൽനിന്ന് ലംബമായി [illegible] -
perpendicular from || point to EW line
Sine (ഭോർജ്യാ) ഭുജ്യാ.

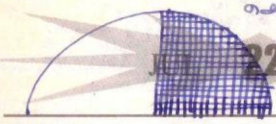
JUL 21 MON

അതിന് NS line ലേക്കുള്ള ദൂരം കോടിജ്യാ
(Cosine)
P E യിൽനിന്ന് അകലുമ്പോൾ (പ്രദക്ഷിണമായി [illegible]) ഭുജ്യാ വർദ്ധിക്കും, കോടിജ്യാ കുറയും.
P = N ആകുമ്പോൾ Cosine = 0. and
Sine = radius of the circle.
വീണ്ടും തിരിയുമ്പോൾ P circle ന്റെ മറുഭാഗത്തെ [illegible]. അപ്പോൾ Cosine [illegible]. maximum ആകുന്നത് P = W ആകുമ്പോൾ. അപ്പോൾ Sine = 0. ആയിരിക്കും.
(150 AD [illegible] -) See [illegible] [illegible], [illegible].

[|| mean W = E = [illegible]
See [illegible] -]

P [illegible] 366 ദിവസത്തിൽ = 732
[illegible] (365 1/4 ആണെങ്കിൽ 731½ [illegible])
[illegible] Sine, Cosine Commute [illegible] 180 Sine & Cosine Commute [illegible]. ഇതാണ് latitude, longitude എന്ന

നമ്മൾ വിളിക്കുന്ന lines. 90° ആ commute ചെയ്യാൻ/180° ആ commute ചെയ്യപ്പെടലായി. അത് ...



ഉദാഹരണ ന്യായം 3420 − +3 | 3423.

കലിവർഷം 3423ൽ കാണുക:

3423 − 427 = 2996.

2423ൽ കാണാൻ 1996..

ഇത് തുടർച്ചയായി ചെയ്യുന്നു.

$\{(3423 - 427)\,12 + 8\} \times 30$ −

$\{(2996)\,12 + 8\} \times 30.$

$2996 \times 20 \times 30$ −

or $2996 \times 600 = \underline{1797600}$

17 | 976 | 00.

ഉത്തരങ്ങൾ.

Another:- complicated procedure – ~~1000 + 1000 + 1000 + (1000 − 577)~~

2423 ന്റെ 1996.

$1996 \times 100 = 11958.$

$\frac{1996}{107} = 18.$

$11958 + 18 = 11966.$

$\frac{(11966 \times 10) + 698}{9761.} = \frac{120358}{9761.}$

$120 \times 30 + 30 + 11958.$

$390 + 11958 = 12348.$

$\boxed{\frac{11}{703}}$

$12348 + \frac{8}{11} \times (11) + 444.$

$12356 + 444 = 12800.$

$\frac{12800}{(703)} = 16.$

$12348 - 16 = \frac{12332}{7} = \underline{1761}.$ ബാക്കി 5.

∴ ചൊവ്വ ആഴ്ച.

ഇതും complicated procedure ചെയ്തിരുന്ന [illegible] [illegible]. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] ആയിരുന്നു.

Sup:— (1) 11958, 11959 എന്നിവയുടെ— See Dresden Codex.

(2) 4/203 എന്ന വർഷത്തിന്റെ [illegible].

(3) [illegible] [illegible] 3423 [illegible] [illegible] [illegible] [illegible] [illegible] കാലഗണന [illegible].

(4) 11959 എന്ന സംഖ്യ [illegible] [illegible] predict ചെയ്യുന്നത് [illegible].

[366 × 6 = 2196

2196 − 200 = 1996.]

5 — ~~1996~~ [illegible] ~~1996~~

$$\frac{1996}{1830} \; 166$$

5 വർഷവും [illegible] + 166 ദിവസം 1996 ദിവസത്തിൽ ഉണ്ട്

$\frac{166}{30}$ = 5 മാസം 16 ദി.

5 വർഷം + 5 മാസം + 16 ദി. ie [illegible]

[illegible]. $\frac{1996}{7}$ = 285 ആഴ്ച, 1 ദിവസം

(ഏകദേശം 285 [illegible] ആഴ്ച).

32.6[illegible]

366) 11959.
1098
979
732
2470
2196
2740
2562
1780
1464
3160
4

= ~~32.6749~~

32 വർഷം 247 ദി.

$\frac{247}{30}$ = 8-മാ

32 വർഷം 8 മാ. 1 ദി.

32	247-

$\frac{11959}{7}$ = 1708 ആഴ്ച | 4 ദി. [illegible]

366×5 = 1830-
between 1830 & 2196-
one point → 1996.

$\frac{1996}{584}$ - 584) 1996 (3
1752
244.

3 [illegible] + 244 ദിവസം.

1996 ദിവസം = 32 [illegible] + 247 ദി.
3 [illegible] + 244 ദി.
only 3 days diff.-

[ഈ 3 days diff is added to [illegible] 8420 to make it 8423 in the beginning]

π = is a [illegible] transcendental number.

$\frac{22}{7}$ = 3.142857, 142857 - - -

$\frac{3.142857}{4}$ = 0.785714,25.

$\frac{\pi}{4} = 1 - \frac{1}{3} + \frac{1}{5} - \frac{1}{7}$ - - - - - - - -

fractions go forever, bouncing from a 8mm bigger than $\frac{\pi}{4}$ to one smaller than $\frac{\pi}{4}$ & you can never get there exactly, but can get as close as you want if you are patient.

$\frac{1}{3}$ = ·3333 - - - - .

$\frac{1}{5}$ = 0·2

$\frac{1}{7}$ = 0·142857.

$\frac{1}{9}$ = 0·[illegible] 111111

$\frac{1}{11}$ = 0·090909

$\frac{1}{13}$ = 0·076923 - - 076923

$\frac{1}{15}$ = 0·0 6666 - - -

$\frac{1}{17}$ = 0·0588235, 294117647 - - 058 - -

$\frac{1}{19}$ = 0·052631578947368421, 05 - - -

Homework -

1·0000
0·3333
0·6667 +
0·2
0·8667
1·7534

1·000 —
0·333
0·667 +
0·2
0·867 —
0·142857
0·724143 +
0·111111
0·835254 — (bigger than $\frac{\pi}{4}$)
0·090909
0·744345 +
0·076923
0·821268 —
0·666666
0·1546027
0·058823
0·213425 —
0·052631 - - - - -
0·160794

$\frac{256}{81}$ = 3·161, 975308641, 9753 - - - -
([illegible] India)

Hebrews thought π = 3.

JUL 29 TUE

1/21 = 0.04761, 04761.

1/23 = 0.04347826086260, 8260, 8260---

1/25 = 0.04.

1/27 = 0.037, 037-

1/29 = 0.03448275862068 96

1/31 = 0.0322, 222----

1/33 = .030303---

1/35 = 0.0285714, 5714----

1/37 = 0.027027

1/39 = 0.025641, 025641

1/41 = 0.02439, 02439---

1/43 0.0241860465 11, 604651 1---

1/45 = 0.02222---

JUL T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

30 WED

.0.160794+
0.04761
.208404 —
.043478
.164926+
0.004
0.204926 —
0.037037
.167889+
.034482
.202371 —
.032222
.170149+
.030303
.200452 —
.028571
.171881+
.027027
.198908 —
.025641
.224549
.173367+
0.024390
0.197757 —
0.024186
0.172571+
0.022222
0.194793

1	.66.
2	.86.
3	.72
4	.83
5	.74
6.	.82

463/6 = 77.16...

.77

1	.15
2	.21
3	.16.
4	.20
5	.16.
6	.20
7	.16
8	.20
9	.17
10	.20
11	.17
12	.19
13	.17
14	.19
15	.17
16.	.19.

2.89 = 17

463+
289
7.52

7.52
22
= 0.3418, 18, 18...

.77+
.17
.94.

25
16
120
20

AUG F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

<u>On precession of Equinox</u> Carl Sagan.

12000 yrs back Vega was polestar.

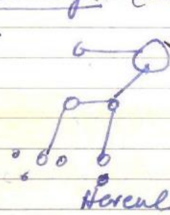
14 000 yrs after it will again be the polestar.

ie 26000 yrs for one star (to become polestar)

Movement of celestial equator once in 26000 yrs.

<u>Cygnus [illegible] (Wings) [illegible] Vega.</u> ([illegible])

cygnus.



Summer triangle [illegible] angle [illegible]. 5th brightest star.

[ie, Even Modern astronomers accept / [illegible] of Paithamaha.]

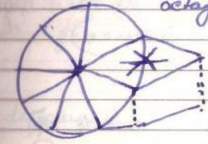
26000 yrs for 360°.

360° = 26000 yrs.

$1° = \frac{26000}{360} = 72.2$

$\frac{2600\cancel{0}}{36\cancel{0}} = 72.22$ (650, 1300, 18, 9)

octagon × 9 = 72 [illegible].



72.2 yrs = 1°

722 yrs = 10°.

7220 yrs = 100°.

21 660 = 300°

4332 = 60°

21660 + 4332 = 25992 = 360°

To be precise 25992 to 26000 yrs of precession of equinox.

[illegible] to [illegible] almost 180°

ie $\frac{25992}{2} = 12996$ to $\frac{26000}{2} = 13000$ yrs.

[illegible] AD427

[illegible] 1997. ∴ 1997 − 427 = 1570 yrs.

5080, 10160, 722, 361

361) 5080 (14
361
1470
1444
26

722 = 10°

∴ 1444 = 20°.

$1066 = \frac{1}{72.2} \times 1016 = 14°$.

total = 20 + 14 = 34 26 − [illegible]

AUG 02 SAT

[illegible]. opposite [illegible] (180°) [illegible], [illegible] - That must be correct because [illegible] (Aquila, Cygnus) [illegible] nebula [illegible]. (observational evidence)

[illegible] longitude, latitude [illegible] equivalent [illegible] Right ascension, declination.



Right ascension [illegible] Greenwich Meridian [illegible] or Vernal equinox. [illegible] 0 [illegible] 24 hrs [illegible]. [illegible] Right ascension - [illegible] Rt ascension [illegible] 60 mt [illegible] 60 sec - [illegible] divide.

Declination: Celestial equator [illegible] Equator = 0°. + 90° at North Celestial Pole. - 90° at South Celestial pole.

AUG 04 MON

13864

<u>Precession of equinox</u>

72.2 yrs. = 1°

In 1 yr = $\frac{1}{72.2}$ = $\frac{10}{722}$ = 0.013862

= 0.013862° (negligible)

difference between this & 76: ([illegible])

= 76 − 72.2 = 3.8

72.2 × 2 = 144.4   76 × 2 = 152

$\frac{360}{3.8}$ = 94.7

= 94.

72.2 × 94 = 6786.8

72.2 × 96 = 6931.2

72.2 × 97 = 7003.9

91 × 76 = 6916

72.2 × 20 = 1444.0   76 × 18 = 1468

diff = 24 yrs.

72.2 × 96 = 6931   76 × 91 = 6916.

diff. only 15.

72.2 × 60 = 4332.0 = 76 × 57 = 4332

diff – nil.

4332 വർഷത്തിൽ precession of equinox & ക്രാന്തിക്ഷേത്രങ്ങളും ഒരേ ഭേദത്തിൽ വരും.

4332 വർഷം = 4332 × 366 ദിവസം

```
      366
    25992
   25992
  12996
  1585512
```

ശുക്രചാരം:

$\frac{1585512}{584} = \frac{198189}{73}$

= 2715 (6 days less).

വ്യാഴം

$\frac{1585512}{4380} = \frac{132129}{365} = 362$ (1 day less) –

[$\frac{198189}{73}$ = 2714, ബാക്കി 359 ഉണ്ടാകും [illegible] ∴ less 6 of an yr.)

$\frac{132129}{365}$ = 362, (ഒരെണ്ണം. $\frac{132130}{365}$ = 362 ആവും –
∴ 1 day less ആണുള്ളത്) –

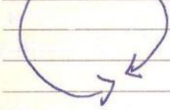
ശനി, വ്യാഴം, ശുക്രൻ, ചന്ദ്രൻ, ക്രാന്തിക്ഷേത്രങ്ങൾ, precession of equinox എന്നിവ 4332 വർഷം (or 1585512 ദിവസം) കൊണ്ട് ഒരേ ബിന്ദുവിൽ വരും.

Precession of equinox.	Mly ക്രാന്തിക്ഷേത്രങ്ങൾ.
72.2 yrs of 1°	57° = 4332 yrs.
∴ 4332 yrs 60°.	360° = $\frac{4332}{57}$ × 360
360° = $\frac{4332}{60}$ × 360.	= 228 × 120
4332 × 6 yr.	= 27360
25992	

∴ [illegible] 24, 27 [illegible] school of thought [illegible] (see [illegible]) –

4332 yrs = [illegible] 60° | [illegible] 57° — ie 3° diff

AUG 07 THU



In "2 diff. directions" ∴ when will they come to the same point actually?

27360 −
25992
1368 yrs ൽ [illegible]

earlier we found that in one yr the difference is a negligible 0.013862.
in 1368 how much will be difference

0.013862 ×
1368
0.110896
083172
05586
013862
015.363216

difference = 15°
In that case 15° × 24 times or 1368 × 24 yrs = 32832 yrs [illegible] 360° difference [illegible]. (16416 yrs = 180°

diff. [illegible] 8208 yrs 90° [illegible], 4104 → 45°, 24624 → 270° [illegible]

AUG 08 FRI

25992 −
24624
1368. (again 1368° difference)

ie 270 + 15 = 285° diff [illegible] (24624 + 1368) = 25992
or 25992 + 1368 = 27360. [illegible]
285° + 15 = 300° [illegible]

	yrs	[illegible]
1368×2 =	2736 =	15.363216°
1368×3 =	4104	
1368×4 =	5472	
1368×5 =	6840 =	61°.452864
1368×6 =	8208	
1368×7 =	9576	
1368×8 =	10944	
1368×9 =	12312	
1368×10 =	13680.	153.632160
1368×11 =	15048	
1368×12 =	16416	
1368×13 =	17784	
1368×14 =	19152	
1368×15 =	20520	230°.448240

(PTO)

	yr	degree	
1368 × 16 =	21888		
1368 × 17 =	23256		
1368 × 18 =	24624		
1368 × 19	25992	291°	901104
1368 × 20 =	27360	307°	264320.

Supposing the ബ്രഹ്മം has started from മേഷം 1°, w.r.t the zodiac, a place between 291° to 307° is the place where it get equalised. It means 9 രാശി, 21° to 10 രാശി 7°.

This corresponds to മകരം 21° to കുംഭം 7°.

Take the position of fixed stars:—

ധനു 1° to 13°-20' = മൂലം.

13°-20 to 26°-40' – പൂരാടം.

26°-40 to 10° മകരം = ഉത്രാടം.

മകരം 10 to 23° 20' = തിരുവോണം.

23°-20' to 7° 20' = അവിട്ടം.

അങ്ങനെ ആണ്ടുമാറി Precision of equinox

കണക്കാക്കിയ പിതാമഹൻ (വേദാംഗജ്യോതിഷ കാലത്ത്) അവിട്ടത്തിൽ സ്ഥിതിചെയ്യുന്നു.

അഭിജിത്ത് (വേഗ) ധ്രുവനക്ഷത്രമായി വടക്കെ ആകാശത്തിൽ സ്ഥിതിചെയ്യുന്നു. വസിഷ്ഠന്റെ കാലത്ത് വിശാഖ ഹോമകാർത്തിക (Lynx) ധ്രുവതാരമായെടുത്ത്

നിർണ്ണയിക്കാം എന്ന്. ഭൂമധ്യരേഖാഭാഗത്തെ ഉള്ളവർ നമ്മുടെ ധ്രുവതാരം Celestial equator ൽ ഉള്ള ആയില്യം മകം ആണെന്ന് പറയും.

ഈ Middle position ആയില്യം മകം ... ~~നക്ഷത്രങ്ങൾ ...~~

ആയില്യം മകം നക്ഷത്രസമൂഹത്തിനടുത്തുള്ള സപ്തർഷിസമൂഹത്തിന് ആ സ്ഥാനം കൊടുത്തതായും രേഖപ്പെടുത്തി.

ഈ സ്ഥാനമാണ് വരാഹമിഹിരൻ ആയില്യത്തിൽ അയനമായി സ്ഥിതിചെയ്തത്.

Carl Sagan etc: 26000 വർഷത്തിൽ ഒരു പ്രാവശ്യം precision of equinox നടന്ന് Vega ഒരിക്കൽ ഇനിയൊരു ധ്രുവതാരം (Big bear) സ്ഥിതിചെയ്യുമെന്ന് പറയുന്നു. ഇതിനെ യാതൊരു പ്രത്യേകതയുമില്ലെന്ന് മനസ്സിലാക്കിയിരുന്നു.

+90° declination എന്നും — 90° declination എന്നും 0° declination എന്നും രേഖപ്പെടുത്തുന്നു.

0° declination ആണ് ആയില്യം മകം എങ്കിൽ +90° declination കാർത്തിക – –90° declination വിശാഖം; അനിഴം –

0° declination അവിട്ടം ആണെങ്കിൽ +90° declination again കാർത്തിക; –90° declination = again അനിഴം വിശാഖം – This depends on the observer's position on earth.

6 മാസം ... (..., ...) ... about 20° ... ...

രേഖപ്പെടുത്തി.

127 × 186 = 762, 1016, 127 → 23622

176 × 190 = 15840, 176 → 33440

218 × 215 = 1090, 218, 436 → 46870

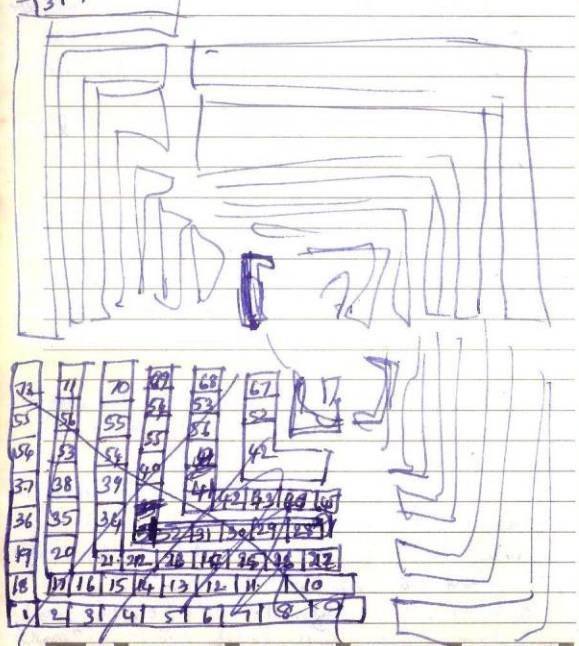
253 × 183 = 759, 2024, 253 → 46199

278 × 168 = 2224, 1808, 278 → 46704

293 × 108 = 2344, 2930 → 31644

292 × 45 = 1460, 1168 → 13140

AUG 12 TUE



AUG F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S
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AUG 13 WED



65×64 = 4160

127×186 = 23622

176×190 = 33440

218×215 = 46870

253×183 = 46199

278×168 = 48104

293×108 = 31644

292×45 = 13140

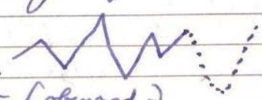
247179 / 8 = 30897.375

247179

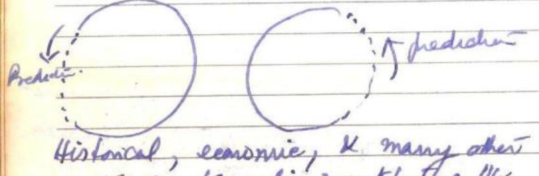
SEP M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Prophets & Prediction - The history ^ prophecy from Babylon to wall street - by Richard Lewinsohn. Translated by Arnol & J. Pomerans. Secker. Warburg - London - 1961 - (author was a Viennese physician)
Page 32 - 34   4 ways ^ prediction

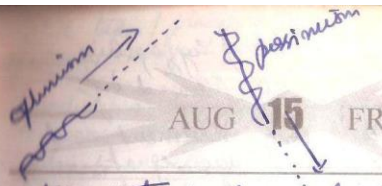
(1) The Zigzag line.
Action & Reaction.



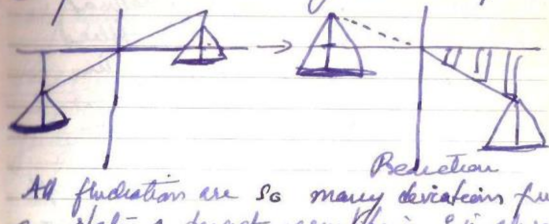
— Progress to date (observed -)
- - - - - (prediction) every action followed by reaction in / opposite sense which need not be equal in intensity or duration
(2) The circle. Recurrence ^ equal phenomena



Historical, economic, & many other events are periodic repetitions ^ the phenomena. Once / phase ^ a given cycle is known, / subsequent phases can be predicted.
(3) The straight line - Rise & fall.



All main trends have a basic direction, though / direction may be subject to minor fluctuations. Optimists assume continuous progress, while pessimists assume a continuous decline.
(4) / balance. Tendency towards equilibrium



All fluctuations are so many deviations from a state ^ perfect equilibrium which is always restored in / end. / principle of symbol ^ justice.

Long term pessimistic prophecies:- Thomas Robert Malthus → no ^ people ^ soil there won't be enough resources - another is entropy derived from thermodynamics.
cyclical:- In Asia & Greece →
Also / theory ^ business cycle in economics.

/ balance → resemble / zigzag line w // here too action is followed by reaction. but in / line movement need not be equal. In balance equal.
A normal line drawn thro / fulcrum of / balance will produce 2 congruent triangles. (Karma theory.)
R. W. Babson's prediction of / stock exchange crisis in 1929 – was based on this principle. This idea of natural equilibrium plays a role → in applied biology, agronomics, medicine, in man's sense of justice.
Predictions:– of modern scientist. But he does not admit it.
Refusal to make prediction on principle just because so many past predictions were false, is nothing but fatalism or deliberate escapism.
People who claim // they never predict ~~if we~~ are ~~[illegible]~~ unobservant of their own behaviour. No builder, doctor or merchant can go about his daily business without making predictions to anteriors..... Even in medical prognoses – personal experience & opinion

still takes / place of objective standards & systematically verified methods far too frequently.

(predictions based on astrological position of planets – based on pathol. Δ → etc empirical or inductive in nature.
predictions based on dreams – intuitive subjective.
Intuition & induction → not necessarily contradictory, both may be necessary to arrive at / correct prediction (98)
" "
Page 40. Experience of businessman. Their experience means a faith in one's own judgement – "once bitten twice shy."
Most of their 'experience' is actually based on / experience of others. ie 'experienced' men are far less experienced than they think they are. / main advantage of experience is quick reaction to stimuli. — Quicker & more decisive predictions.
Planning: → based on intuition, deduction & induction – not mere prediction → means shaping / future as one wants it to be.

Methods of prediction (49—50)

Classifn.	Basis.	Characteristics	Applicability
Intuitive	Revelation	Belief in transcendental inspiration, revelation but faith to validity of prediction.	Religious prophecy.
	Inspiration	sudden realisation of hidden connections	discoveries & inventions
deductive	verifiable laws.	deduction of particular prediction from a general principle	~~Astrology, fortune telling palmistry.~~ science, sociology
	pseudo laws	prediction from illogical or antiquated principle.	Astrology, fortune telling palmistry
Inductive	Individual experience	unsystematic deduction from false analogy.	work particularly crafts
	Experiment	generalisation of systematised individual investigation	science, technology
	statistics	Conclusion from aggregates according to probability theory.	Meteorology, Medicine, Public opinion polls, economic research, insurance, Govt
Activist	Individual action	predictions of the results of voluntary behaviour	everyday life
	Planning.	long range and complex objectives creation of new conditions.	Industry, public finance armaments
Imaginary	Creative fiction	utopias, Science fiction	Literature art
	Unconscious fiction	visions based on wish fulfillment & past events	Dream visions Hallucinations.

The Bārū — BĀRŪ — Seer in Babylonia.
([illegible] — Bhaarat — [illegible])

Babylonian Astrology:
Planets — "[illegible]" wild goats
fixed stars → tame goats
Jupiter → Marduk / beneficent
Mercury → Nabu son of Marduk.
Mars → Nergal. } war gods.
saturn → Ninurta }
Sun → Ishtar.
Ishtar Astarte — ♀ of sun — goddess of sexuality & fertility.
chaldean — biblical term for babylonian —

is synonymous c astrologer.

Old Testament Prophets

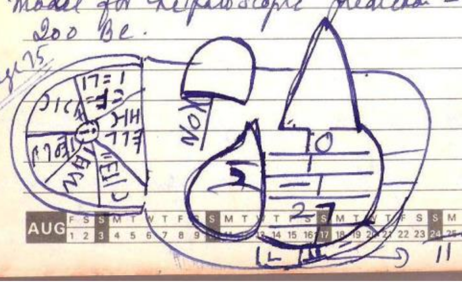
Jehovah – Revealed in 3 ways
① dreams ② visions ③ miraculous signs.
Place of monk / prophet was usurped by monk / sage whose task was to explain Jehova's past revelation

Astrology & Medicine – Relationship.

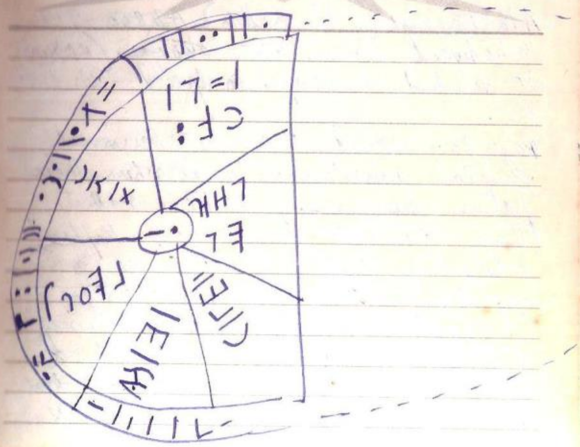
for future prediction – 5 organs
Liver (hepatoscopy) & (also
spleen. intestines)
kidney.
lung.
heart.

Bronze liver from Piacenza – Etruscan model for hepatoscopic prediction – 300-200 BC.

Page 75.



Π, F [illegible]
10, 1, –1, 27, 1- etc - [illegible]



Under / emperor Alexander Severus (AD 223-235) who was a phoenician origin astrology became an official Roman science c a special school & c state subsidies.
Arabs:- Albumazar (Abu-Maaschar) (ie AD 805-885) calculated // creation has occurred when / 7 planets were in

conjunction w/ 1° of Aries & announced
// end of world would coincide c̄ a
// conjunction in / last degree of Pisces.

AUG 23 SAT

Albategnius (Al Battan) AD 850–929 –
introduced houses into astrology. (BAS 00)
1st detailed horoscope in Greece – in 280
B.C.

Page 83 – What were the serious &
critical astronomers to do when their
patron demanded predictions rather
than scientific knowledge? Kepler,
who like Tycho Brahe, was
expected to cast horoscopes for
his noble employers, consoled himself
c̄ / fact // astrology, though a
'mad daughter' came to / aid of her
poor & aged mother, astronomy, &
helped to support her. Such
was / tragic plight of real astronomers
...

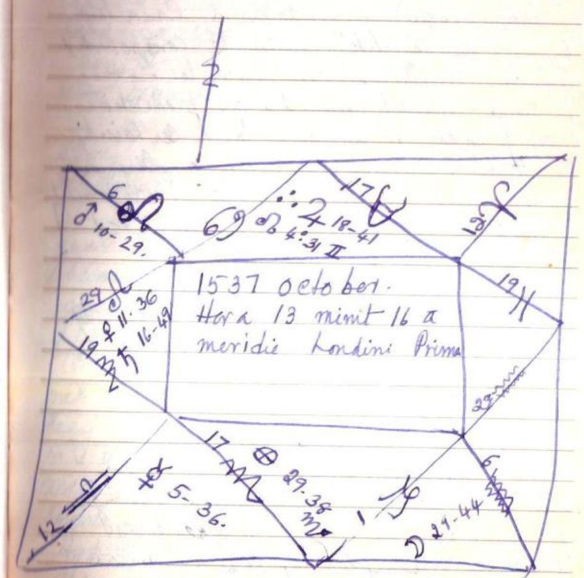
24 SUNDAY

Geronimo Cardano (1501–1576)
physicist, mathematician,
physician, astrologer. He
predicted // King Edward VI
of England would fall ill at / age of
55 yrs 3 months 17 days. (But died at
16)

Cardano admitted // astrologers would
have to cast / horoscopes of / associates as
well.

AUG 25 MON

Horoscope of Edward VI by Cardano.



Do England – Sir William Petty laid / foundations of statistical science in / 2nd ½ of 17th century. Blaise Pascal (1623–1662) & Pierre de Fermat (1601–1665) – masters of Calculus by e probabilities could be compounded from mathematical formulae - - - - / new school based on predictions on / fact // between total certainty & total uncertainty there lay a vast range of possibilities, / probability of each of e could be calculated / c. mathematical precision.

(Pascal – 1st introduced a Calculating machine in 1641 at / age of 18. Leibniz in 1673 & J. H. Muller in 1782 another machine)

A fellow gambler Chevalier de Mere asked Pascal how / stakes will be fairly redistributed among players when a game of dice was suddenly interrupted; / how a given player's future chances of success in / game could be taken into account

in / redistribution. (Pascal at / age of 30) – He called this probability theory aleae geometrie = / geometry of / dice.

unaware // Galileo had studied / chances of throwing / game some 12 yrs & Cardano 100 yrs earlier – Pascal thought he had found an entirely new branch of science.

In Pascal, rationalism conflicted strongly c an inner bend towards mysticism (Page 88)

- - - - weighing up of future gains & losses c all / tricks of mathematics became not only a favourite social game, but occupied / greatest minds of / time. / Swiss mathematician Jacob Bernoulli set to perfecting / mathematical method, & made it / possible for probability theory to play / very large part it does in / modern meteorological, astronomical, medical, technical, economic & other scientific predictions.

Hypnosis, Somnambulism – Clairvoyance – — , Mystics like Kierkegaard & critical minds like Schopenhauer

believed in mere spiritualistic phenomena. Spiritualism took 3

forms in / 19th century.

(1) Communion c̄ / dead - A temporary resurrection of / past (2) telepathy - / bridging distances - (3) divination - ie bridging time.

Competent mediums were masters of all 3 branches of / art.

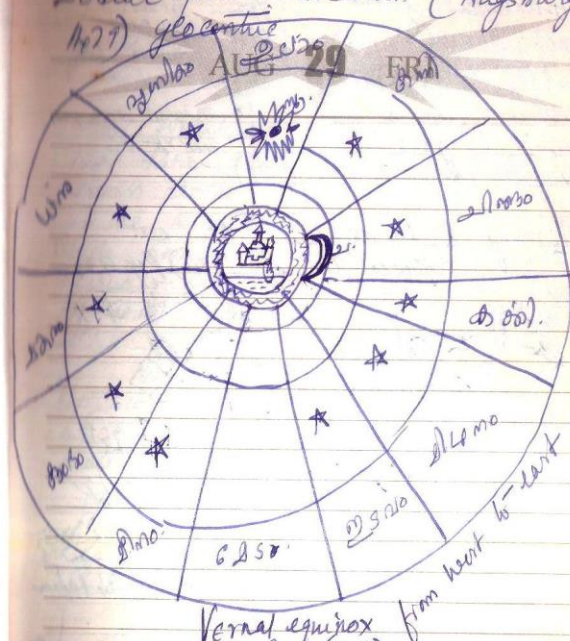
Middle of 19th century → / third branch - bridging time (divination) declined.

Modern children will tell you about / splitting of atoms as though they had / observed / / process personally (V Page 94)

/ bridge between / mystical world & / world of reality is said to be / symbol. (95)

[Hipparchus observed / sun entering Aries in March. Now — in April. ∴ one entire house has been shifted]

Zodiac from Lucidarius (Augsburg 1477) geocentric



sun's ecliptic (apparent orbit thro stars) - fluctuates from 22°54' to 25°21' - in 26000 yrs. At present tilted at 23°27'. in / course of / century at / rate of 50". / minimum inclination will occur in / 6600. Maximum in 19600.

AUG 30 SAT

Astrological zodiac of Hipparchus was not the 1st one. The precision of equinoxes had by then been occurring for millions of yrs & there is no means of saying which particular position must be called the original one. (98)

Mercury & his children (from an English astrological Calendar 1503) Page 99.



Mercury appears as Painter with pen, with chisel & hammer.
[illegible]

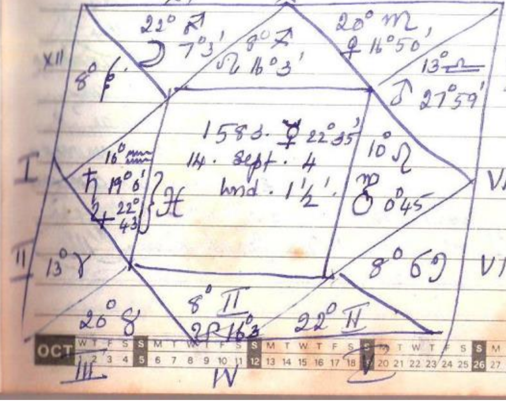
31 SUNDAY Music, Medicine, Arts and sculpture, astronomy, scholasticism — all belong to Mercury.

AUG F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

SEP 01 MON

Mercury like its Babylonian predecessor "Nabu" — the Royal Star — is a rather unreliable fellow. He means no real harm. But causes ugly & nervous people to be born when he is in the ascendant (?) — (Eccentric (?))
People born under Aries:— temperamental
Taurus:— like tame domestic oxen. diligent, careful, reflective, patient, a little slow. (Page 100)

Horoscope of Wallenstein (1608) cast by Kepler! Kepler failed to predict Wallenstein's assassination



OCT W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

SEP 02 TUE

Why people who are not normally inclined to mysticism & magic, are attracted to astrology? Astrology is a system — a simple system — // any layman can understand. Like all systems — / most strictly scientific — astrology is based on axioms, i.e., on basic assumptions // cannot be proved theoretically essentially. / axioms ɪ astrology are ① // everything in nature & consequently in human life, follows a regular course ② // / stars have a decisive influence on terrestrial processes.

/ 1st axiom — determinism — is a cardinal principle ɪ science. But astrology is not deterministic, it does not exclude human volition. (114)

Astrology unlike other forms ɪ divination is not an occult science based on supernatural forces. It is a 'science' e rejects miracles & inexplicable phenomena, on principle. It states its axioms openly, gives written evidence 1/ way in /e/ it arrives at its conclusions. (116)

SEP 03 WED

Freud & prophetic dreams

1900 — Prof. ɪ Neurology at Univ ɪ Vienna Sigmund Freud — gave a series of lectures "on dream Interpretation." only 3 students attended his 1st lecture. His book on this — published in / same year — 600 copies. 123 copies only sold in / 1st 6 months. only after 8 yrs 600 copies sold.

/ ancient belief → dreams reveal / future. Dream has origin in / past — / future is shaped in / likeness ɪ / past. Basic attitude ɪ Freud was this.

A dream give a fair indication ɪ how / dreamer imagines / future, what his / secret wishes & hopes are, & how if it were left to him alone, he would try to fashion his life.

125 — A dream is an entire drama in e / dreamer sometimes takes / stage himself, but in e / dreamer ~~sometimes takes~~ more often is a mere observer ɪ / objects ɪ his + ɪ — he wishes dressed up in / strangest disguises. Every dreamer is a poet who works ē an almost inexhaustible store ɪ fantasy // rarely stops short where / professional dramatist would. Laws ɪ space & time, e ɪ cause

& effect are completely discarded, processes are speeded up even more quickly than they would be in American films & passions are masked beyond recognition.

Prophetic & creative dreams:-

According to Freud, every dream is significant.

The language of dreams is a highly individual picture language. - there are more than one interpretation to any dream. Leading dream interpretators rely on intuition & long experience rather than on a fixed rule.

In some cases the dreamer needs no interpreter to tell him how to act on his dreams. childhood & later memories may rise up so vividly, that the effect is carried over into waking life with a consequent change in behaviour that may have lasting effects on the dreamers future.

Prospective dreams :- those which reveal latent possibilities that may or may not be put into practice.

Painful premonitory dreams :- paralysing pains are dreamt at the inception of a disease / illness.

pleasant prophetic dreams :- which release creative artistic or poetic faculties. Even important technical inventions &

scientific discoveries are alleged to have been discovered in that way.

Gauss - law of induction
Kekule - The Benzol ring
Paul Ehrlich - side chain theory
Niels Bohr - Atomic model.
} ? day dream

A good deal of poetic artistic or religious ideas - born in real dreams.

Telepathy & clairvoyance :

Even Freud admitted that Telepathic dreams do occur. During 1st world war he dreamt that one of his sons was killed in action. The son came home unscathed. He said telepathic dreams are not dreams but "telepathic experiences in sleep".

Kamper :- telepathic phenomena & dreams are mutually compatable since experiences shows that somnolence with its obliteration of time & space creates favourable conditions for telepathic contacts. The question remains - are the telepathic

contacts mere fantasies, or whether they can provide real answers about / future.

SEP 06 SAT

Psychoanalysts avoid an answer & state // telepathy is outside their field — they are concerned ē psyche not ē revealed future, they say. Psychoanalysis is introspective & retrospective rather than prospective & not interested in predicting / future.

Telepathy is transference ↑ thoughts, feelings, pictorial concepts, sensations from one person to another ē out perceptible intervention ↑ either / senses or of artificial means (English psychologist F. W. H. Myers — / 1st proponent ↑ telepathy) A kind ↑ remote communication in waking & dream states. No physiological explanation.

Psychology dump telepathy & 7 SUNDAY clairvoyance as parapsychological - a term coined in 1889 by Max Dessoir (German philosopher)
France — Metapsychie
USA — ESP (extrasensory perception)

SEP M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T ☼
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J. W. Dunne (England's 1st pilot, air craft constructor, mathematician, physicist) ~~1922~~ SEP 08 MON His book "An Experiment ē Time" — all human beings have / ability ↑ looking into / future to some extent & // given / patience & practice, all ↑ us could learn to make correct predictions.

England is / 1st country in ē serious attempt was made to turn parapsychology into a real science. / / English writers (Society for Psychical research) attempted to correlate parapsychology ē theoretical physics & mathematics, & ē / new ideas about / 4th dimension from 1882 onwards.

Dunne's method :- Record / dream immediately upon waking - otherwise they are quickly forgotten. In / absence ↑ dream memories / jot down / 1st waking thoughts — for these are frequently influenced by / preceding dream.

1932 — 3 series ↑ tests carried out by / society on Dunne's method - Results were poor. Dunne was not a

OCT W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F
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Correctly.
Is time reversible

SEP 11 THU

/ term 4th dimension made its debut in / middle of / 18th century in / French encyclopaedia -
1887. C.W. Hinton "What is / 4th dimension?"
/ point in time e we call / present is nothing but our point of observation, for past & future are one. Dunne took up this speculative theory. Later Einstein & Minkowski included it into their new world picture - gave it a more prosaic meaning. Schrodinger & de Broglie - introduced a 5th dimension into their wave theory (& even higher dimensions)
Running a film backwards, time could be reversed (cinema)
[B.J.H. also]
Continuous time does not exist, from a sequence of individual moments / human eye construct a continuum. (de Bergson) Every still in / film points clearly to its successor, & in

life just like in / film, / future is already contained in / present!
Psychological events may be

12 FRI

reversed.
Dunne's fantastic notion of a 5 dimensional world, e contain / entire past & / entire future of / 4 dimensional world. In waking state we, who dwell on this 5 dimensional world behave as if we lived on a 4-dimensional world & in dreams we soar beyond it to survey / future & / past e greatly enhanced powers of imagination.
(/ 5 dimensional world can be surveyed from a 6 dimensional world - -)
Time is multi dimensional.
Prof. C. D. Broad (Cambridge Univ) suggested a 5 dimensional picture. To visualise / mechanism of precognition imagine / 2nd time dimension as a line perpendicular to / horizontal time axis of / 4 dimensional world.

Page 145 / Sirius cycle of 1461 years, / great astronomical discovery of / Egyptians, also lead to / introduction of

mere dreamer — but a theosophical visionary — a new Swedenborg.

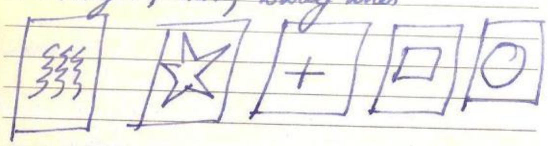
SEP 09 TUE

E.S.P: Research

psi-processes :— processes apparently contradicted by generally-held scientific principles. Among psi-processes ESP like clairvoyance, & telepathy play a leading part. (These are ESP phenomena)

ESP research → J. B. Rhine ^ Duke Uty North Carolina.

A young discipline — not yet ventured to complex subject ^ prophetic dreams. Restricted to investigation ^ precognition — Zener Pack ^ cards. Ask subject ? card will turn up next. 5 Symbols on Cards. Circle, + sign, rectangle, star, wavy lines



Ask to predict a sequence of 5, or 25 cards — experimenter checks results in a control room.

SEP	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	☼
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	☼

G. N. M. Tyrell → a system ^ illuminated boxes instead ^ zener cards.

SEP 10 WED

A pack ^ 25 zener cards contain 5 × 5 symbols. chances are 1 to 5 of a given card eg a circle will lie on top ^ a star. Probability Considerations → in a short run ratio is not maintained, If game is continued long enough 1 to 5 ratio maintained.

Some people have a greater faculty for guessing. Others — lesser faculty. Some people are particularly precognitive.

less educated & primitive people → more clairvoyant.

people who are optimistic or neutral more clairvoyant. Sceptical about ESP → negative results.

Argument :— good will & faith alone are sufficient to turn a man into a clairvoyant — (Page 138)

(Value ^ expt is limited — It is not applicable to day to day clairvoyant experiences) fact // human beings cannot predict a series ^ cards is no proof // they cannot predict personal events

OCT	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

mythological & cyclical ideas of time. Whenever the cycle was about to run its full course, the phoenix would rise up

SEP 13 SAT

in India, or according to another version in the north, to return to Egypt where after having been burned to ashes in the Sun temple at Heliopolis, it would be resurrected to new life. With every 1461 yrs, not only heavenly but also terrestrial processes followed one another in rhythmical succession. Another Egyptian cycle of 36525 yrs – (100 times as many yrs as the yr has days) – After that a golden age recommence on earth.

Caballistic numbers:

7×77 in the bible.
= 539 yrs. or its multiples
1078
1617 & so on.

Current:– Prediction of election results – Gallop Poll.
Public opinion polls.
Economic forecasts
Weather forecast. (only in 19th century – scientific meteorology

14 SUNDAY

SEP M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

growing late – Because it was seared as the stepchild of astrology – (Page 178.)

SEP 15 MON

[In 1524 – on Feb. 2nd – Johannes Stoffler's Almanac → predicted a great flood – Planetary conjunction in Pisces. This did not take place]

Barometers & thermometers → foretell the weather & temp.

The 3 great L's –
Lavoisier, Lamarck, Laplace.
(French) all born in 1740's; close friends

unlike [3 B's of music – Bach, Beethoven, Brahms]

Lavoisier from Chemistry
Lamarck from Botany } to meteorology
Laplace from Astronomy

Lavoisier set up weather stations in France to get regular reports. He was appointed as fermiers generaux → ∴ along with others of this post (28 in all) he was guillotined by revolutionists.

Lamarck → observed the clouds & classified them. Compiled weather charts with assistance of Laplace.
"All nature is purposive – part of a living

OCT W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

SEP 16 TUE

is / art ^ adaptation' - Lamarck.
Laplace: "A mind ē at a given moment had full knowledge ^ all / forces vitalising nature, & / position ^ all / beings ^ ē nature is composed & ē would moreover be broad enough to submit these phenomena to analysis would be able to apply one & / same formula to / motions ^ / celestial objects & / lightest atoms alike. Nothing would be uncertain for such a mind & past & future would be immediately present"
His celestial mechanics: - everything worked like a clock // needed no one to wind it up.

191 Geographically a no: ^ centres ^ activity from ē cyclones (depressions) & anticyclones (high pressure) take their origin. Anticyclones formed in Azores, Bermuda Δ, Siberia, Central part ^ N. America, cyclones → Iceland & / mediterranean. These regions are meteorologically

SEP 17 WED

related. Depression between Iceland & Norway means high pressure between Azores & Mediterranean.
If winter is severe in North Europe mild in N. America cold in Mexico. Somewhat ∥r to / simultaneous fluctuation ^ liquid in / 2 arms ^ a U tube.

192:
All animals, birds → weather prophets.
croaking frogs - good weather.
unusually loud croaking → storm.
toads & salamanders come out at night → bad weather.
Before a storm bees retire to hives.
swarm in / early morning ^ bright days.
Cock crow in / afternoon → Rain next day.
rainy, or cloudy weather → some plants close - / scarlet Pimpernel.
Direction ^ wind - / best empirical criteria for judging weather changes.

sunspot cycles - 11½ yrs. (average)
chinese records - AD188.
actual - between 7 & 17 yrs.

A direct effect on economies.
1878 — W. S. Jevons — English economist → economic crisis coincide c̄ sunspot cycle.

SEP 18 THU

American economist. Warren Persons & H. L. Moore. → influence of sunspot on weather & hence on grain prices.
adverse weather → poor harvest → ↑ price.
connection c̄ large scale storms also. Storms in Siberia, Scandinavia, West Indies, S. E part of USA, South Pacific.
[Europe → worst storms occur when sunspots are minimum.]

Matters of life & death

Medicine — Predictive science.
Medical prognosis is like diplomacy — the doctor cannot simply discuss the objective facts but must dress them up in such a way as to make them palatable to his audience.
Insurance companies, Immigration officials depend upon the doctor's prediction of health of their clients.

SEP 19 FRI

Doctors must rely on their own intuitions & limited experience.
c̄ decline of family doctor & ↑ in hospitals & casualty services → long term observation of a disease is not carried out. ∴ the science of prognosis is not well developed.
3 main factors to be considered in prognosis: ① etiology ② individual characteristic of the pt → constitution, hereditary defects, age, sex, habits, social position ③ the means of therapy.
Medicine is undergoing a pd of decentralisation i.e. of compartmentalisation (other sciences — physics → unification)

1883. Sir Francis Galton — "Eugenics" — the science that deal c̄ scientific breeding to determine the quality of the offspring.
The children of intellectual parents have higher IQs than children of unskilled workers, general Eugenic prognoses can be made for one generation ahead but not for subsequent generations.

SEP M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T O
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OCT W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

exceptional children to ordinary parents — exception to / rule.

SEP 20 SAT

Bernoulli's theorem :- Probability ^ an event is a function ^ its occurrence in / past.

Probability theory is poor science & poor mathematics - (Ruonamian / mathematician - Pius Servien.

For probability it makes no difference whether a long series ^ events occurs during one hr or during one century. ∴ probability calculations are irrelevant to human action & thought ē must be time - bound or else stray into fantasy.

Yet it is used in gambling, in public & private finance. cycles in economy, share market, crisis etc.

21 SUNDAY

It is only a step from speculation to planning - but a very big one.

Ancient Rome - Planus means Adventurer, Vagabond, juggler or charlatan - By 17th or 18th century - people who travelled about propagating a plan were derogatorily

SEP 22 MON

called project - makers.

'The cloud ^ unknowing'

By unknown author ^ 14th century - Introductory commentary, preface & translation by Ira Progoff. Laurel. TM- 6614623 Dell Publishing Co - 1983 (2nd edition)

Saying ^ Jesus :— / Stone ē has been cast aside will become / cornerstone. Approach ^ author - like to Meister Eckhart - emphasise / importance ^ Independent inquiry & individual experience.

The Faith & modern Science

Reginald. J. Dingle. Burns Oates & Washbourne Ltd London. 1935.

Modern Mysteries ^ / world By

Janet. & Collin Bord. 1990 ed. Grafton books. (Strange events ^ / 20th century) -

SEP	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	o
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OCT	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F
	1	2	3	4	5	[illegible]	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Poltergeist (according to Parapsychology) noisy spirits.

SEP **23** TUE

Esoteric Christianity or / lesser mysteries Annie Besant. Theosophical publishing house. Adyar.

A Krishna, a Buddha, a Lao-Tse a Jesus, are / highly civilized but lineal descendants of the whirling medicine-man of / savage. (6)

The comparative mythologists consider all religions as branches from a common trunk - human ignorance. The comparative religionists - branches from a common trunk - Divine wisdom spoken of as / wisdom, / gnosis, Theosophia.

20-21- Pythagoras / great teacher who was initiated in India & who gave / 'knowledge of things that are' to his pledged disciples, is said to have possessed such a knowledge of music that he could use it for / controlling of men's wildest passions & / illuminating of their minds.

21- The Pythagorean school in Magna Graecia was closed at / end of 6th century

SEP **24** WED

BC owing to persecution by / civil power -

22- The inner school - of 3 degrees.

1st of hearers :- Studied for 2 yrs in silence, doing their best to master / teachings.

2nd degree was / mathematici -> geometry music, nature of no; form, colour & / sound were taught

3rd degree :- Physici - who mastered cosmogony & metaphysics - This lead up to / true mysteries.

outer school :- disciples leading a family & social life.

23. There was much intercommunication between / initiates of all nations, & there was a common language & a common symbolism. Pythagoras journeyed among / Indians, & received in India a high initiation, & Apollonius of Tyana later followed in his steps.

The village Gods of S. India. Henry Whitehead. Summit Publications Delhi. 1976.

SEP 25 THU

Where / family developed into a clan / clan into a tribe, / tribe into a nation, / nation into a conquering empire / God of / family naturally developed into an imperial deity.

ഗ്രാമദേവതയുടെ shrine :-

Usually female deity ← agricultural / fertility deity; war

അയ്യനാര്

അയ്യനാർ — night watchman of / village. / temple of his shrine crowded with clay figures of horses.

ആന്ധ്രപ്രദേശ് :— Potu-Razu — (Brother / husband of / village goddess is / equivalent of Ayyanar.

Telugu :- പെദ്ദമ്മ. (മൂത്തവൾ)
ചിന്നമ്മ. (ഇളയവൾ) / e Goddess.

In some villages Potu Razu with his 7 sisters — പോലേരമ്മ, [illegible], മാരമ്മ, [illegible], [illegible], [illegible], [illegible]. (8 Powers of the universe)

സപ്തകന്യക. [illegible] [illegible] (കേരളത്തിൽ [illegible]

[illegible] പുരാണത്തിൽ -)

ഉമ്മ അഥവാ ഉമ്മാൾ എന്ന് വിളിക്കുന്ന [illegible] ദേവി.

SEP 26 FRI

സപ്തകന്യക (സപ്ത കന്യകമാർ) [illegible] deities.

South Arcot District :- [illegible] ദൈവം. [illegible] വിവാഹം ചെയ്യാൻ [illegible] [illegible] [illegible] ദൈവം. (.[illegible] caste [illegible] Subdivision) [illegible].

[illegible] — [illegible].

[illegible] (ബിംബം = [illegible]. [illegible]) Shrine not covered with roof. A brasspot full of water with a mirror leaning against it called Kannadi ie. eye-mirror.

There are 7 മാരി ദേവതമാര്.

ഉമ്മ = mother of the [illegible].

[illegible], [illegible] ([illegible]) [illegible] → also considered as one of / [illegible].

[illegible], [illegible], [illegible] — [illegible] - a generic name of [illegible], [illegible], [illegible], [illegible].

SEP 27 SAT

Pidari is guardian against evil spirits and epidemics, esp. cholera. കാളി ചില ക്ഷേത്രങ്ങളിൽ ഗ്രാമത്തിന്റെ ദേവത. ചില സ്ഥലത്ത് എല്ലൈക്കൽ- [illegible] സ്ഥലങ്ങളിൽ എല്ലൈപിടാരി.

ഗ്രാമീണരെയാ മധുര മീനാക്ഷിയോടോ [illegible] ലെ ദേവിയുടെ അവതാരങ്ങൾ മാത്രമല്ലാതെ [illegible]ക്കാർ. സർവ്വസ്വതന്ത്രയായ അമ്മന്മാർക്കിത്ര [illegible] ബലി [illegible]മില്ല.

പറയന്മാരുടെ ദേവിയുടെ അവതാരങ്ങൾ കരുതപ്പെടുന്നു. An evil spirit residing in boundary stone is called എല്ലൈക്കറുപ്പ്.

At Irungalur in Trichinapoly District — An Enclosure Sacred to [illegible] — outside village, c̄ out image or sacred stones in it. During festivals a [illegible] of leaves erected — An earthen pot decorated placed to represent Goddess. The pot is filled c̄ [illegible], has a silver coin, — മഞ്ഞൾ, (വേപ്പ്, മാവില) അതിന്റെ വായ കെട്ടിവെച്ചിരിക്കുന്നു - "കരകം". [illegible] ആരാധിക്കുന്നു.

[illegible] ഒരു [illegible] കലശം.

28 SUNDAY

SEP 29 MON

Symbol of Potu Raju - ശൂലം.
[illegible] വലിയ [illegible] ഒരു [illegible] [illegible] രൂപം [illegible] ഒരു [illegible]
[illegible] 7 കന്യകമാരും [illegible] — [illegible] (Compare c̄ [illegible] of Japan) [illegible].

നടുകല്ല് :- Planted Stone. [illegible] വർഷത്തിൽ - [illegible] [illegible] ആണ് [illegible].

The Stone placed at the entrance of Tamil villages is akin to the [illegible] — the navel stone — at the foundation of villages of Telugu desam. The spirit of land over which the village is built.

കർണ്ണാടകം - കോലിക്കുഡെ? ദേശം → ഗ്രാമത്തിലെ [illegible] shrine [illegible]. [illegible] വാതിൽക്കൽ [illegible]. No image. [illegible] represent deity. [illegible]. ഒരു picture frame [illegible] - [illegible] picture. 1½ [illegible] 1 [illegible] 2 [illegible]

SEP	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

OCT	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

[illegible Malayalam].
Pujaris → lower caste w/ care of

[illegible Malayalam].

[illegible Malayalam] ([illegible]) – [illegible Malayalam]. [illegible] Buffalo sacrifice [illegible] outcaste. [illegible] Basadi girls, do not marry, are made ബസവികൾ – Consecrated to / goddess & become prostitutes. (ബസവ = bull.)
[illegible Malayalam] in 4 wks.

~~Village Country~~:

മൈസൂരിലെ 7 മാരികൾ
1. [illegible] മാരി ([illegible])
2. [illegible] മാരി.
3. [illegible] മാരി. ([illegible])
4. [illegible] മാരി.
5. [illegible] ദേവി. ([illegible])
6. [illegible]
7. [illegible].

February യിൽ [illegible Malayalam] 4 [illegible]. (1) [illegible] (2) [illegible] (3) [illegible] (4) [illegible].

Chapt. 7. Folklore of Village Gods of S. India.

[illegible Malayalam]:— [illegible Malayalam].

[illegible Malayalam]:— [illegible Malayalam] deified.
[illegible Malayalam].

Page 115.

[illegible Malayalam]:→ One of 9 great Rishis in olden days, named Piruhu, had a wife named [illegible] famed for beauty & virtue. [illegible Malayalam] face became dotted w/ marks of small pox. Piruhu drove her away.
another story:— wife of [illegible].

116:— Mariamma was/ mother of പരശുരാമ & wife of ജമദഗ്നി.

OCT 02 THU

. . . . ബ്രാഹ്മണ ശിരസ്സും പറയ ശരീരവും → മാരിയമ്മ. പറയ ശിരസ്സും ബ്രാഹ്മണ ശരീരവും → യെല്ലമ്മ. യെല്ലമ്മയ്ക്കു പോത്ത് ബലി.

[illegible] എന്നറിയുന്ന വൈഷ്ണവ ദേവി → കന്യാകാപരമേശ്വരി.

അമ്മവരു (അമ്മകളി) വിന്റെ [illegible] [illegible] നവ [illegible] നിറവും [illegible] [illegible], [illegible] [illegible], [illegible] [illegible], സത്യസാഗരവും [illegible] [illegible], [illegible] [illegible] അമ്മവരു [illegible]. [illegible] [illegible] 3 [illegible] അവർ [illegible]. [illegible] [illegible]. [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible] അവതാരമായ [illegible] [illegible] [illegible] [illegible] [illegible] അമ്മവരു വിന്റെ [illegible] [illegible].

Osiris cult:— [illegible] [illegible] Osiris [illegible]. അദ്ദേഹത്തിന്റെ മകൻ ഹോറസ്. [illegible] [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible] ചില

[illegible] [illegible] ഹോറസും [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] വായ് [illegible] [illegible] [illegible] [illegible]

OCT 03 FRI

വായ് തുറക്കുന്ന ചടങ്ങ്. (മലയാളം)

[illegible] [illegible] [illegible] വായിൽ വലതു കൈ വെച്ച് വായ് തുറന്നു പിടിക്കുന്ന ചടങ്ങ് ([illegible] [illegible] [illegible])

Book of the Dead:— E.A. Wallis Budge — drawings in the inside of coffins → under 5th dynasty.

ഇതിൽ ഒരു ചിത്രത്തിന് opening the mouth ceremony യിൽ [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible] [illegible]. Egypt & South Indian ceremony [illegible] — (Page 159 - 160)

The Ramayana tradition in Asia. Ed. by V. Raghavan. Sahitya Academy 1980.

Ramayana in Sanskrit literature:-

[illegible] രാമായണ [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] [illegible] രാമായണത്തിൽ [illegible] [illegible] [illegible]

യന്തോ നമിതു ഭയ:"
ശ്രേഷ്ഠമായ് വാത്മീകിയോട് മഹാഭാരതം രചിക്കാൻ
പറഞ്ഞപ്പോൾ വാൽമീകി :-

ഈ രാമായണം ഉടൻ വ്യാസം ബ്രഹ്മസ്വയംഭൂ
നിന്നു ദേവോ ഹ്യരാം ശ്രീ: ക്ഷേത്രമോഹവിവർത്തി
വ്യാസൻ ജനിക്കുമ്പോൾ അദ്ദേഹത്തിന് തന്റെ
ഞാൻ സനാതന വ്യാസ മഹാഭാരതം
താൻ പുരാണങ്ങളിൽ രാമകഥ പറയുന്നതെന്ന
തന്റെ ചൈതന്യമിത്രമെന്നും.

തേവു തേവു പുരാണേവു മഹാഭാരതവം
യത്ര രാമ ചരിത്രം സ്യാത് തദഹം ഗ്രഹിക്കാം
ചതുർലി:— ബാനരസേനയിലെ ഒരു വാനരൻ
കവി സ്തുത്യാരാധന ചെയ്യുന്നത്

ബ്രഹ്മസം ഹിന്ദുദേവോ ദേവി ചിത്ര
പാദ്യ വാനരന്മാരെ ശ്രീ സ്തുതി യദക്കുവാൻ നിഷ്ട
മൈമാന മന്ത്രാ: സചിതോ ഫ ദക്കേദ്രീവി
ചിരിയമാ വഴം

ഉതർദേവി കാദേശം യദക്കുപുഷ്ട
Javanese Ramayana. Soewito Santoso :—
Since More than 10 centuries — /

time of ശ്രീ മഹാ രാജാ രക്കൈ
വാട്ടുകര ശ്രീ ബലിതുങ് ശ്രീ ധർമ്മോദയ
മഹാശംഭു of Mataram —
Ramayana Kakawin is younger than
/ old Javanese ആദിപർവ്വം, അശ്വ
വിരാട, & / ഭാരതയുദ്ധ of Mpu Sedah

older than ഉത്തരകാണ്ഡ & ബ്രഹ്മാണ്ഡപുരാണം.
date 13th century A.D. (Kern)

Alder Poerbatjaraka → Balitung period
reign 820 – 832 or 898 – 930 AD.
Kakawin :— Episodes.
Megrahan / story of Indonesia :— Himansu Bhushan Sarkar.

Earliest trace — in annals of Liang dynasty China (502-56) — In / 14th year of Tien-chien period (AD 515) prince Po-ch-ich-ta-lo (? ബ്രഹ്മദത്ത) of Lang ya kingdom (Lang-ya-hsu — or ലങ്കാശുക) send an envoy named A-che-to (അജിതൻ) to present a memorial to / chinese emperor. He told / / walls & palaces of his imposing cities are high & lofty as ഗന്ധമാദനം. Kingdom of Lang-ya had a port — a halting station for ships between India & China.

A record of Kambuja → from 6th century — A copy of രാമ., ഭാ., & a പുരാണം was recited daily before ത്രിഭുവനേശ്വരൻ.

7th century Campa inscription → A temple in which image of Valmiki is installed.

OCT	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

NOV	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

OCT 07 TUE

Indonesian phase :— AD 732.
സഞ്ജയന്റെ ശിവലിംഗം രാജാവിന്റെ
ശിവലിംഗത്തിനുള്ള്യം.
In Subsequent inscriptions a few people who were witnesses at/ foundation of freeholds in places at Central Java → names identical with celebrated people of രാമായണം — രാവണൻ, ലങ്ക, ഹനുമാൻ, സുഗ്രീവ്, ഭരതൻ, രാമൻ, ലക്ഷ്മണൻ, നാരായണൻ, അംഗദൻ, സീത, വിഭീഷണൻ, വാലി, ലക്ഷ്മണൻ. These names were well known in Central Java between AD 824 – 928. ശിഖണ്ഡി, കുംഭകർണ്ണൻ, ഇന്ദ്രജിത്ത്, മണ്ഡോദരി എന്നിവ ഇല്ല.
old Javanese രാമായണം ക്രോഡീകരിച്ച according to Balinese tradition — രാജശേഖരൻ കവിതാപ്രിയൻ(?).
Ramayana in Philippines - Juan R. Francisco:—
Maharadia Lawana — a condensed version of Ramayana. (മഹാരാജ രാവണൻ) — is an 8-headed son of Sultan of പുലു ബന്ദിയർമസിർ. His father banished him to പുലുനഗര.

OCT 08 WED

അഗമ നിയോഗത്തിലെ സുൽത്താന്റെ മകൻ രാജ മംഗന്ദിരി, രാജ മംഗവർണ്ണ എന്നവർ പുലു ബുംബരനിലെ സുൽത്താന്റെ മകളായ തുവാൻ പോത്രെ മലൈല ഗന്ദിങ്ങിനെ വിവാഹം കഴിഞ്ഞ് 10 yrs നിലനിന്ന കടൽ യാത്ര ചെയ്തു. കപ്പൽ ചേതം വന്നു. അവർ പുലു നബന്ദയിൽ എത്തിച്ചേർന്നു. മംഗന്ദിരി തുവാനെ വിവാഹം കഴിച്ചു. നാട്ടിലേക്കു മടങ്ങുംവഴി തുവാൻ സ്വർണ്ണമാനിനെ കണ്ടു. മഹാരാജ ലാവണ തുവാനെ കട്ടുകൊണ്ടു പോയി. മംഗന്ദിരി നാൽ ഒരു കുരങ്ങൻ കുട്ടി ഉണ്ട് — അവൻ ലക്ഷ്മണൻ. ലക്ഷ്മണൻ മംഗന്ദിരിക്കു ഒരു പക്ഷി മൂലം തുവാനെ രക്ഷിക്കാൻ സഹായം നൽകി. ലാവണൻ യുദ്ധത്തിലേക്കു തിരിച്ചുവന്ന് സ്വയം മരിച്ചു. മംഗന്ദിരിയും തുവാനും ആനന്ദത്തോടെ സ്വന്തം നാട്ടിലേക്കു പോയി. ലക്ഷ്മണൻ ഒരു സുന്ദരനായ 'ദത്തു' (datu) ആയി മാറി.

Monkey son — Lakshmana born of മംഗന്ദിരി & പോത്രെ മലൈല → ഹനുമാൻ?
(ഹനുമാൻ) Sha numan is the Grand parent of Kra Kechil in the fairytail. (Kra kachil = ചെറു കുരങ്ങ് / ലവകുശം)
മലേഷ്യൻ നാടോടി കഥ:— തൈമൂരിന്റെ ഭാഗം (fairytail) ൽ ഹനുമാൻ മുഖ്യ കഥാപാത്രം — (രാമായണത്തിൽ നിന്നല്ല)

[illegible] - ([illegible] fairy tale) [illegible] [illegible].

OCT 09 THU

ലാവണ is ദ്രാവിഡ in fairy tail -

In Same version:— [illegible] ശ്രീരാമൻ. [illegible] [illegible] രാവണനെ [illegible]. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] രാവണന്റെ [illegible] [illegible] [illegible].

Arab reports of S. E. Asia [illegible] Serindib [illegible].

(Dimashky 1325 - [illegible] ([illegible], [illegible], [illegible]) സീതയും രാവണനും elope [illegible] fairy tale [illegible]. [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] ([illegible]) [illegible] revenge motive fairy tale [illegible].

Ramangana in Laos:- Phonetic changes

രാമ —> ലാമ.

സീത — OCT സീദ 10 FRI (സീദ - lady)

ലക്ഷ്മണൻ — ലക്.

ഹനുമാൻ. ഹനുമന്ത്, ഹുലുമാൻ

സുഗ്രീവൻ — സുക്രീപ്

രാവണൻ — രാപ്പണ സുവൺ, [illegible]

ലങ്ക — ലോങ്ക.

The true hero is not Rama but Ravana — a clever well read young man of great beauty & charm, enjoying the protection of Indra.

Sita → daughter of Ravana & Mandodari.

Hanuman → Son of Rama.

[illegible] ([illegible]).

[illegible] [illegible]. [illegible], [illegible], സീത [illegible] ([illegible]) [illegible].

Ramayana in Burmese literature:-

Kakawin → The demon crow punished by Rama & Lakshmana before Sita's wedding.

Ramayana in inscription:

[illegible] from whom / അവന്തി kingdom / family is supposed to have become a part of / നന്ദ empire of മഗധ / 4th century BC.

നാഗാർജുനി ഹിൽ (ഗയ ജില്ല ബീഹാർ) → cave inscription of 3rd century BC → mention / മൗര്യ king ദശരഥ, a name well known to Ramayana tradition.

Nanaghat (നാനാഘട്ട്) inscription of ശാതവാഹന Queen നായനിക (നാഗനിക) of Deccan – in ബ്രാഹ്മി – 1st century BC.

Hathigumpha inscription / Jain king ഖാരവേല of കലിംഗ / coastal areas of Orissa & A.P. / Royal sage രാജർഷി വസു mentioned in it, – from whom ഖാരവേല of the ചേദി clan claims descent.

നാസിക് (നാസിക്ക്) cave inscription / 19th regnal yr / ശാതവാഹന രാജാവ്

വാസിഷ്ഠീ പുത്ര പുളുമാവി (131–59 AD) – his father ഗൗതമീപുത്ര ശാതകർണി (106–31 AD) is eulogised. He is compared to "Rama, Kesava, Arjuna, Bhimasena tulya Parakrama

[illegible] സഗര യയാതി രാമന്മാരും [illegible].

[illegible] — [illegible] → ഹിമവത് സാഗര പര്യന്തം [illegible]

രാജശേഖരന്റെ കാവ്യമീമാംസ — ഹിമാലയത്തിൽ [illegible]

വടക്ക്:— ഹിമാലയം, മാനസസരസ്, ഗന്ധമാദനം, കൈലാസം, കേദാരം, സുമേരു, പ്രാഗ്ജ്യോതിഷ [illegible], വംക്ഷു (Oxus) ബാഹ്ലീകം.

തെക്ക്:— ഇന്ത്യാസമുദ്രം, കന്യാകുമാരി, [illegible] (തിരുനെൽവേലി [illegible]) സേതു, സുവേലം, [illegible], മലയ പർവ്വതം - ([illegible])

കിഴക്ക്:— വംഗം, ലൌഹിത്യം (ബ്രഹ്മപുത്ര) കിഴക്കേ സമുദ്രതീര പർവ്വതം, ഗംഗാസാഗര സംഗമം.

പടിഞ്ഞാറ്:— സിന്ധുവിന്റെ [illegible], പടിഞ്ഞാറൻ കടൽ, [illegible] പർവ്വതം, [illegible] പാരസീകം.

Karhad plates of രാഷ്ട്രകൂട monarch കൃഷ്ണ III :— [illegible]

ബോധിവംശ inscription (588 - 89 AD)
of ബുദ്ധിസ്റ്റ് monk Mohanaman →
he was born in ലങ്കാദ്വീപ്, identical to
സിംഹളദ്വീപ് "ലങ്കാദ്വീപ്"

Ramayana in Sinhala literature
& its folk version — J. തിലകസിരി
"ജാനകീഹരണം സന്ദേശ" of king Kumara
dasa. A friend of കാളിദാസൻ
Hero king കുമാരധാതുസേന of
Ceylon (517 - 526 AD)
കിര സന്ദേശ (Parrot message)
allusions to Rama - Sita story.
15th century ഇട്ടിൽ കാവ്യം (ഇട്ടിലൻ
— ബുദ്ധൻ രാമ അവതാരമായി [illegible]
[illegible]) also.
രാവണ കഥാവലി, രാവണ [illegible] etc
കാണ്ഡ്യൻ period ൽ [illegible]
[illegible] സന്ദേശങ്ങൾ [illegible]
രാമായണം.
കോഹോംബ കങ്കാരിയ :- folk dance
in honour of god കോഹോംബ. The
story of the king of flower or
മലിയരാജകഥാവ (മലയരാജകഥാവ)
കോഹോംബ ദേവിയുടെ ഉത്ഭവകഥാവ
(കോഹോംബ ദേവിയുടെ ഉത്ഭവകഥ)
കാണ്ടിജില്ലയിലെ നൃത്തം.
രാമനായി [illegible]

സീതയെ പിരിഞ്ഞു താമസിച്ചു. രാമൻ കാട്ടി
ലിരിക്കെ രാവണൻ സീതയെ അപഹരിച്ചു.
[illegible] രാവണൻ [illegible]
സീതയെ വീണ്ടെടുത്തു.

7 വർഷത്തിനു ശേഷം സീതയെ രാമൻ തിരഞ്ഞു.
വാലി [illegible]. (Could walk on
sea, Immune from fire & arrows —
[illegible]) - He's tail → set Lanka
on fire. He carried back Sita to
Rama.
രാമൻ ദേവന്മാരുടെ സദസ്സിലിരിക്കെ,
[illegible] വായുവിലൂടെ സീത രാവണ
[illegible]. കിടന്നു [illegible].
കിടന്ന [illegible] രാമൻ [illegible].
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] അവർ മലയരാജ്യ
ത്തെ 3 ദേശങ്ങളിൽ താമസമായി.
ലങ്കയിലെ [illegible] ദേവരാജാവിന്റെ
[illegible] 3 [illegible] രാമൻ
[illegible].
രാവണനില — രാവണിലം — several [illegible] —
[illegible] — medicine.

സീതാ വകം :— jungle fortress to which she was carried. — now / new town called Avissawella.

OCT 16 THU

സീതാതളവ. (Plain of Sita) – സീതയും രാവണന്റെ മകനും ഒളിച്ചിരുന്ന സ്ഥലം. സീതാ കോടെ, സീതാഎലിയ, രാവണ എല്ല എന്നീ സ്ഥലനാമങ്ങൾ –
കോത്മലെ → സീത ഇരുന്ന അശോക വനം.

Ramayana in ഫോക്‌ലോർ & legend of the ഐലൻഡ്. C. E. Godakumbura.
Story of Seetha — നാടോടിഗാനങ്ങളിലും. ഭ് ഗ്രാമഗാനങ്ങൾ കേട്ടറിയാം.
/ Sita 1st performed during / reign of പാണ്ഡുവാസുദേവ, / 2nd sinhalese king (5th century BC) ഇന്ത്യയിൽ നിന്ന് വിജയന്റെ പിൻഗാമിയായി ദേവിയെ വിവാഹം കഴിക്കാനെത്തിയ ഭദ്രകാത്യായനി ... ശേഷം പാണ്ഡുവാസുദേവൻ കുടുംബത്തിൽ ഉണ്ടായി – മലയരാജാവ് ഇന്ത്യയിൽ നിന്ന് വന്ന് ... ഉത്സവം നടത്തിയത് സ്വന്തം ...
oldest chronicle of ceylon — ദീപവംശ (4th century AD) has nothing about Vijaya's dealings with a yakkini. മഹാവംശ (5th century AD)

given / incident. യക്ഷിയുടെ [illegible] ... എന്നും ലങ്കാപുര എന്നും ... പറയുന്നു.
... പറയുന്നു.

OCT 17 FRI

1570 ... രാജാവലിയിലും ... രാവണന്റെ ... പറയുന്നു. രാജാവലിയ പ്രകാരം BC 2300 ലാണ് രാവണൻ ജീവിച്ചിരുന്നത്. വിജയൻ ശ്രീലങ്കയിൽ വന്നത് (BC 610 ... – ബുദ്ധന്റെ കാലം) അതിന് വളരെ മുമ്പായിരുന്നു ... ഉണ്ടായിരുന്നില്ല.
ലങ്കയിലെ ... (മഹാവംശത്തിൽ ലങ്കാപുരം) ... (... പുരം) എന്ന നഗരം ഉണ്ടായിരുന്നു. mention ചെയ്യുന്നു.
Trincomalee was ഒരു തിരുകോണമല ... → ... .
Mahayana magical text → ... "വിഭീഷണന്റെ ..." (before 9th century AD) ... പറയുന്നു.
old Shiv form — രാവണ (രാവൺ)
South east Cost of ലങ്ക →
6 nautical miles from shore →
2 rock chip islands → ... രാവണ കോട്ട, ... രാവണ കോട്ട (large & small fortress of Ravana), രാവണ ... .

Photo electric effect നാണ് ഐൻസ്റ്റീന് നോബൽ സമ്മാനം ലഭിച്ചതെന്ന് ചൂണ്ടിക്കാട്ടുന്നു എഴുത്തുകാർ —

General theory of relativity യെ അടിസ്ഥാനപ്പെടുത്തി ഇന്നു നാം കാണുന്ന ഗുരുത്വാകർഷണ നിയമത്തിൽ നിന്ന് ഐൻസ്റ്റീൻ എങ്ങനെ എത്തിച്ചേർന്നു എന്ന് [illegible] സിദ്ധാന്തം ഉൾക്കൊള്ളുന്ന [illegible] മായി ചില വസ്തുതകൾ അറിയുന്നു.

പ്രിൻസ്ടൺ യൂണിവേഴ്സിറ്റിയിലെ Mathematical Physics professor ആയിരുന്ന വാലന്റൈൻ ബാർഗ്മാൻ Ideas & opinions of Einstein എന്ന ഗ്രന്ഥത്തിന്റെ 570 ഭാഗത്തിനടുത്ത [illegible] യിൽ General theory of Relativity യെപ്പറ്റി ഒരു ലഘുവിവരണം നൽകിയിട്ടുണ്ട്. Inertia, gravitational mass എന്നിവയിലെ ആധാരമാക്കിയതാണ് ഈ സിദ്ധാന്തം. 1911ൽ എഴുതിയ ഒരു ലേഖനത്തിൽ തന്നെ ഐൻസ്റ്റീൻ ഗുരുത്വാകർഷണ മണ്ഡലത്തിന് (gravitational field) gravitational red shift ന്റെ frequency യിൽ വരുത്താവുന്ന മാറ്റങ്ങളെയും സൂര്യന്റെ ഗുരുത്വാകർഷണ മണ്ഡലം പ്രകാശരശ്മികളെ വളയ്ക്കുന്നതിനെയും ചർച്ച ചെയ്തു. 1916ൽ ഈ സിദ്ധാന്തം [illegible] 10 [illegible] ഐൻസ്റ്റീൻ [illegible]. (By that time Einstein had already derived the third astronomical effect of General relativity namely the motion of Mercury perihelion (Page 218. Ref. 1)

[illegible] സിദ്ധാന്തങ്ങളിലൊന്നാണ് ജനറൽ തിയറി [illegible] അതായത് (1) ഗുരുത്വാകർഷണ മണ്ഡലത്തിന്റെ മണ്ഡല സമവാക്യങ്ങൾ. (2) ഭൗതികകണങ്ങളുടെ ചലന നിയമങ്ങൾ. 1927ൽ മാത്രമാണ് മണ്ഡല സമവാക്യത്തിൽ നിന്ന് ചലന നിയമം ഉരുത്തിരിഞ്ഞു വരുമെന്ന് കണ്ടെത്തിയത്.

London times ന്റെ ആവശ്യപ്രകാരം What is the theory of relativity എന്ന ലേഖനം ഐൻസ്റ്റീൻ എഴുതി Nov 28. 1919 (Nobel Prize കിട്ടുന്നതിന് 2 വർഷം മുമ്പ്) പ്രസിദ്ധീകരിച്ച ഈ ലേഖനത്തിൽ ഐൻസ്റ്റീൻ പറയുന്നത് തന്റെ സിദ്ധാന്തം തത്വികമായി ന്യൂട്ടന്റെ സിദ്ധാന്തത്തിൽ നിന്നും വ്യത്യസ്തവും പ്രായോഗിക തലത്തിൽ ന്യൂട്ടന്റെ സിദ്ധാന്തത്തിനു തുല്യവുമാണെന്ന്. General theory കൊണ്ട് തെളിയുന്ന കാര്യങ്ങൾക്ക് ഉദാഹരണമായി ഈ ലേഖനത്തിൽ താഴെപ്പറയുന്ന (Page 231 – 232 – Ref 1)

1. In the revolution of the ellipses of the planetary orbits round the sun, confirmed in the case of Mercury.

(2) In the curving of light rays by the action of gravitational fields (confirmed

[illegible] :- A kind of mollusc shell seen in water, for rubbing kitchen utensils for cleaning.

OCT 18 SAT

The rocks & waterfall → full of these shells.

[illegible], [illegible] near Kandy [illegible] ([illegible], [illegible])

[illegible]

[illegible]

Page 451. [illegible]

[illegible] (compare Egyptian culture)

[illegible]

([illegible])

[illegible]

([illegible])

Philosophy & Scientific Cognition:

19 SUNDAY

Pyotr Fedoseyev. General Editorial board for Foreign publication. Nauka publishers Moscow 1985.

OCT	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Preface :- author proceeds from a Marxist-Leninist philosophy as general theoretical and methodological basis of scientific cognition of laws of nature & social development, a reliable foundation for an advanced materialist world outlook, an active attitude to life, a powerful weapon against reactionary ideology.

OCT 20 MON

The fact that interdisciplinary studies have become the main line of development of modern science brings out afresh the organic link between special scientific knowledge & philosophy & leads to the new emergence of new forms of their interaction.

Philosophers – 2 types. ① Materialists – who believe of nature, matter is primary. ② Idealists – spirit, consciousness, thinking underly everything

1997. March 16 – 22 – [illegible] - Page 43 [illegible] "[illegible]" [illegible]. [illegible] – 2 [illegible]. ① TPM [illegible] (Page 4) ② V. R. [illegible] (Page 46) [illegible]:—

NOV	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	☼
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	☼

by / English photographs of eclipses)
(3) In the displacement of the spectral lines towards the red end of

the spectrum in the case of light transmitted to us from Stars of considerable magnitude (unconfirmed so far)

സൂര്യന്റെ ഗ്രഹണത്തിലെടുത്ത ഫോട്ടോ
ഐൻസ്റ്റൈന്റെ സിദ്ധാന്തം ശരിയാണെന്ന്
തെളിയിച്ചു. Stephen Hawkings [illegible]
ണം.

Very accurate observations of the planet Mercury revealed a small difference between its motion and the predictions of Newtons theory of Gravity. Einsteins General theory of Relativity predicted a slightly different motion from Newtons theory. The fact that Einsteins predictions matched what was seen, while Newtons did not was one of the crucial confirmations of the New theory (Page 4. Ref. 2.)

In fact the orbits of the planets predicted by General relativity are almost exactly the same as those predicted by the Newtonian theory of

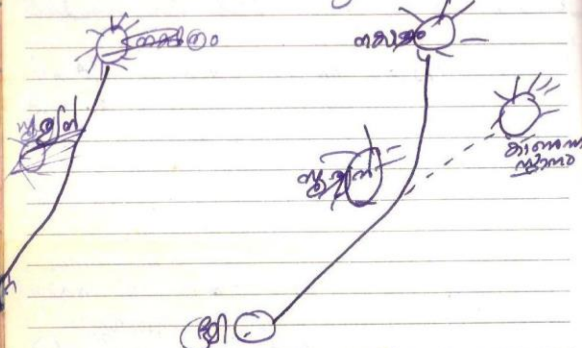
Gravity. However in the case of Mercury, which, being the nearest planet to the Sun, feels the strongest gravitational

effects --- general relativity predicts that the long axis of the ellipse should rotate about the sun at a rate of about one degree in 10000 yrs. Small though this effect is it had been noticed before 1915 & served as one of the first confirmations of Einstein's theory. (Page 86)

ഉദാ: [illegible] Geodesic (രണ്ടു
ബിന്ദുക്കൾക്കിടയിലെ ഏറ്റവും ചെറിയ അകലം)
ആണ് ഗ്രഹചലനം നിർണ്ണയിക്കുന്നതെന്ന്
ഐൻസ്റ്റൈൻ തെളിയിച്ചു. സൂര്യന്റെ [illegible]
[illegible] അതിന്റെ [illegible]
വഴിയെ [illegible] ഭൂമിയിലുള്ള നിരീക്ഷകന് [illegible]
[illegible] സ്ഥാനത്തു നിന്നു [illegible]
(വഴിയുടെ വക്രത കൊണ്ട്) [illegible]
[illegible] ഐൻസ്റ്റൈൻ
വ്യാഖ്യാനിച്ചു. ഒരു വിദൂര നക്ഷത്രത്തിൽ
നിന്നു വരുന്ന വഴിയെ സൂര്യൻ വളയ്ക്കുന്നു [illegible]
നാം ഭൂമിയിലെത്തുന്നത്. അതിനാൽ നക്ഷത്ര
സ്ഥാനം മാറിക്കാണുന്നു. (Space-time വള
ഞ്ഞിട്ടാണ്)

1919ൽ വെസ്റ്റ് ആഫ്രിക്കയിൽ നിന്ന് നിരീക്ഷണം നടത്തിയ ബ്രിട്ടീഷ് എക്സ്പെഡിഷൻ ഐൻസ്റ്റീൻ പ്രവചന വേളയിൽ ഈ അനുമാനം നിരീക്ഷണ വിധേയമാക്കി, സ്ഥിരീകരിച്ചു. പിന്നീടാണ് നോബൽ സമ്മാനം ലഭിച്ചത്.

Photoelectric effect എന്നു പറയുന്നത് ബുധന്റെ ഭ്രമണ കക്ഷ്യാ ചലനത്തിൽ, കണ്ടെത്തിയ ഈ astronomical effect ൽ നിന്നാണ് ഐൻസ്റ്റീൻ derive ചെയ്തു എന്ന് ഈ വാക്യങ്ങൾ വ്യക്തമാക്കുന്നു.



26 SUNDAY Quizൽ ചോദിക്കുന്ന കുട്ടികൾക്കും Multiple choice answer ചെയ്യേണ്ട ഉദ്യോഗാർത്ഥികൾക്കും Photoelectric effect എന്ന ഒറ്റ വാക്ക് മതി. പക്ഷേ ശാസ്ത്രത്തിന്റെ ചരിത്രത്തിലേക്കും, ശാസ്ത്രജ്ഞന്റെ

"ഗ്രഹണ" മേഖലകളിലേക്കും നിരന്തരം യാത്ര ചെയ്യുന്ന സത്യാന്വേഷികൾ അറിഞ്ഞിരിക്കേണ്ടതിന് എന്റെ ലേഖനത്തിൽ പറഞ്ഞ വസ്തുതകൾ അവർ ശ്രദ്ധിക്കേണ്ടിയിരിക്കുന്നു.

[illegible] അന്ധവിശ്വാസ [illegible] എന്തെല്ലാം വസ്തുക്കൾ എങ്ങനെയെല്ലാം കാലത്ത് എന്തെല്ലാം രൂപത്തിൽ കിടന്നാലും അവയുടെയെല്ലാം അനുഭവം ഒരേ മുഹൂർത്തത്തിൽ ഒരേ ദൃഷ്ടിയിൽ സംഭവിക്കുന്നതാണ് ഗ്രഹണം. ആ ഗ്രഹണത്തിലുള്ള പ്രതിഭാസങ്ങളും കാഴ്ചകളും (അവ നൈമിഷികമായാലും ശരിയായാലും) ഭ്രമങ്ങളുടേതാണ്. [illegible] നൈറ്റ് ഭ്രമാത്മകമാകുന്നതാണ്. അതായത്, ഒരു പക്ഷേ ഉപയോഗിക്കുന്ന പദങ്ങൾ പോലും, [illegible] എന്ന തത്വത്തിൽ അർത്ഥവ്യത്യാസം വരുന്നവയാവാം. മാന്യസുഹൃത്ത് ടി. പി. എം. ന്റെ ഈ പുസ്തകത്തിലെ ആശയങ്ങളെ ഗ്രഹിക്കുമെന്ന് കരുതട്ടെ.

DEC 27 SAT

Rice cutlet (10 കട്‌ലറ്റ്)

1) ചോറ് 1 കപ്പ്
2) വേവിച്ച് ഉടച്ച ഉരുളക്കിഴങ്ങ് 1 cup.
3) ചെറുതായി അരിഞ്ഞ ഉള്ളി 1/4 cup.
4) 4 പച്ചമുളക് അരിഞ്ഞത്.
5) 2 tablespoon കോൺഫ്ലോർ
6) ഉപ്പും കുരുമുളകും നിങ്ങളുടെ സ്വാദിന്-

Semolina for coating

1st 6 → ഉം കൂട്ടി ചതുരത്തിൽ പരത്തുക.
Semolina കൊണ്ട് coat ചെയ്ത് deep fry ചെയ്യുക. ചട്ണി കൂട്ടി കഴിക്കാം.

28 SUNDAY

DEC	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

DEC 29 MON

DEC	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28

C/ cell (Reserve)	Product.	Page dart.	Alc blue.	Muc.	Sudan black
	Phospholipid CH/ Bains/ Mucin	Sheehy +	—	—	+ ±
goblet	acid glyco	+	+	+	— +
type II pneumo.	Phospho lipid	weak + (weak fool.)	—	—	+

DEC 30 TUE

cytol - 1 fluids
Refrigerate How to send - within 24 hrs
CSF / urine within 2 hrs.
Preservation
FNAC - / cervical smear.
Coplin jar 90% ethyl alcohol.
Labelling on / slides, sp. bottles & on / req. form.
Biopsy. 10% formal dehyde (formalin)
Container - Supp. size.
Immerse completely in fixation.
Req. form:

Vegetable Soup c̄ Rice dumplings.

DEC 31 WED

① [illegible] ½ [illegible] } [illegible]
Carrot ¼ [illegible]
Spring onion - ½ cup. }
[illegible] 1 teaspoon } [illegible]
Celery - 2 tablespoon. }
Cornflour - 1 tablespoon.
salt, sugar, pepper to taste
butter - 3 tablespoon.
② [illegible] 1 cup
flour ½ cup.
salt, pepper to taste
[illegible] (Sodabicarb)
[illegible] 1 tablespoon

[illegible] 10 mt Simmer [illegible].
[illegible] 5 mt [illegible] Simmer [illegible].

DEC M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

DEC M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

NAME AND ADDRESS | OFFICE | RESIDENCE

91 ഏതു സംഖ്യയുടെ cube root?

91 ×
91
91
819
8281 ×
91
8281
74529
753571

753571 ആണ്

11959 × 11959 × 11959.
11959
107631
59795
107631
11959
11959
143017681 ×
11959
128715 9129
71508 8405
128715 9129
14301 7681
143017681
1786290835 69

1786290835 69

ഈ സംഖ്യയുടെ cube root 91

NAME AND ADDRESS | OFFICE | RESIDENCE

2920 × 2920 × 2920
2920
58400
26280

292 ×
292
584
2628
584
85264 ×
292
170528
767376
170528
24897088

2920 is the cube root of 24897088 00

NAME AND ADDRESS	OFFICE	RESIDENCE

cube root of 27 = 3
to find || of 28.5.
excess 1.5.

ans: 3.14

$\frac{1}{27} \times 4 = 0.14$

2×2×2 = 8.
3×3×3 = 27
4×4×4 = 64
5×5×5 = 125
6×6×6 = 216
7×7×7 = 343
8×8×8 = 512
9×9×9 = 729
10×10×10 = 1000.
11×11×11 1331
12×12×12 = 1728
13×13×13 = 2197
14×14×14 = 2744

6000 [illegible] cube root

NAME AND ADDRESS	OFFICE	RESIDENCE

1729 [illegible] cube root [illegible]
1728 [illegible] = 12.
diff = 1.
$\frac{1}{1728} \times 4 = \frac{1}{432}$
= 0.02
12.02

360 [illegible] cube root – ?
343 [illegible] 7.
diff = 17.
$\frac{17}{360} \times 4 = \frac{17}{90}$
0.188
∴ 7.188

63 [illegible] cube root ?
64 = 4.
$\frac{1}{64} \times 4 = \frac{1}{16}$
= 0.0625
4.0000
.0625
ans: 3.9375

Tangent 1 10 to the 100th
you have to divide by pi
to 100 decimal places.

$\frac{10}{22/7} = \frac{10 \times 7}{22} = \frac{70}{22}$

$= 3.1818181818$

(long division: 22) 70 (3.181 …)

1729.03 ofas cube root
= 12.002

5/1/97. 1 cubic ft = 1728 cubic inches
excess = 1.03. (1 cuberoots excess 1/3 × 1 cuberoots excess ÷ √1000)
for small fraction
∴ find 1 fraction 1/1728
multiply by 4 (divide by 3)
& multiply by 12. $\frac{1}{1728} \times 4 = \frac{1}{432}$
= 0.002
Add this to 12 which is 1 cube root of 1728.

Sadhaka & Sadhana.
5.1.97. Hyderabad Ramakrishna Math

goal of life – spiritual enlightenment – gives everlasting peace. Body – God's gift – the beautiful instrument.

[illegible]

1/1000 men gets the chance to go to spiritual goal.

4 types – [illegible], [illegible], [illegible], [illegible].

Pravarthaka – the beginner.

Sadhaka – learning & reading & perfecting knowledge, wants to exhibit knowledge.

[illegible] – eternally free soul.

Swami Ranganathananda – on Ekadasi (Spiritual Retreat) day

An inward movement of the mind – The Sages discovered. In our normal life we don't recognise it. The sense organs go outside & leave as at the sensory level – [illegible], searching sages, went in search of the imperishable beyond the perishable. They asked the question – Is there anything imperishable.

They gave training to the mind & sense organs to pursue the immortal [illegible] inside. They developed the technique of going in & coming to it the technical term – (2) [illegible] – [illegible]

NAME AND ADDRESS | OFFICE | RESIDENCE

292 × 45 = 1460 + 11680 = 13140

[illegible]– What we usually are engaged in – the newborn babe touching this & that –
[illegible] / Sage took up the challenge – what is there in the human system inwardly.

2 great ideals – Social welfare (food, shelter) [illegible] – [illegible] ([illegible]) [illegible] scientifically developed only in India.

Let us draw all our energies to search the imperishable in ourselves.

In science we suppose a thing – search for it, find it. (deduction)

They declared the immortal in us. The discovery was repeated – A profound established truth in Vedanta.

Body & mind subject to change / infinite Atman – the true nature of us – one infinite reality // is immortal –
[illegible] – Children of immortality.
Not knowing the truth, do not abolish the truth. The infinite behind the finite is the truth. [illegible]:—

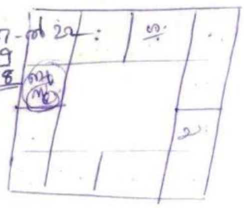
A sage realising the truth
[illegible]:
[illegible]

[illegible] –
There is no other way.
This was repeated by other sages.
Physical sciences deal with physical world –
Upanishads early in human history discovered the profoundest truth – [illegible] –
That is how concept of [illegible] came into our literature.

Sreyas will lead to Nisreyas.
Sankara in Commentary of Gita
[illegible]
[illegible]

Food, shelter, clothing – how to take them beyond the creaturely state.
[illegible] – Karnataka / story of [illegible] to [illegible] –
He has attained [illegible]!
[illegible] ([illegible])
[illegible]
[illegible] ([illegible])
On [illegible], Ramakrishna saw a [illegible].
[illegible] – [illegible] – 6 waves of states for body from birth to death –

Bc-47-[illegible] 22 :
39
8



1986 ×
6
11916

1991 ×
6
11946

1992 ×
6
11952

1993
6
11958

Working condition –
working hrs. staff pattern.
nature of work.
Department.
(Quarters)

520 - Hoyle Fred.
Frontiers of Astronomy - (365)

523. Davies Paul. "The edge of infinity beyond / black hole (5478)

523-1. Sketch [illegible]

The book attempts ~~to [illegible]~~ a holistic ~~a~~ ~~holistic approach~~ study of the Phoenician - South Indian symbiosis, which has hither to been ~~not~~ looked at ~~from one dis cipline~~. ~~The book synthesises the~~ Proofs drawn from various disciplines like ..... ~~at~~ ~~dif~~

0491, 535565. [illegible]
843064. [illegible]
632114. [illegible]
258641 Mohan Ramanan
721456. Johny.
0484. 361555 [illegible]
0491, 531442. [illegible]
382825. [illegible] (Dr)
721181 [illegible]
0487, 720619. [illegible]
0495, 720122. [illegible]
721640. Dr. Sudha.
345616. [illegible]
0495, 301207 [illegible]
301688 }
301393 } [illegible]
0487, 542230. P. Kuttan.

292 ×
45
1460
1168
13140

have ~~dealt~~ ~~with~~ been integrated into the synthesised to arrive at a ~~theme and~~ thereby ~~fortifies existing~~ ~~conclusions~~ ~~and~~ drawing ~~fresh~~ new ~~ones~~ conclusions on ~~the~~ ~~Phoeni~~